

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.

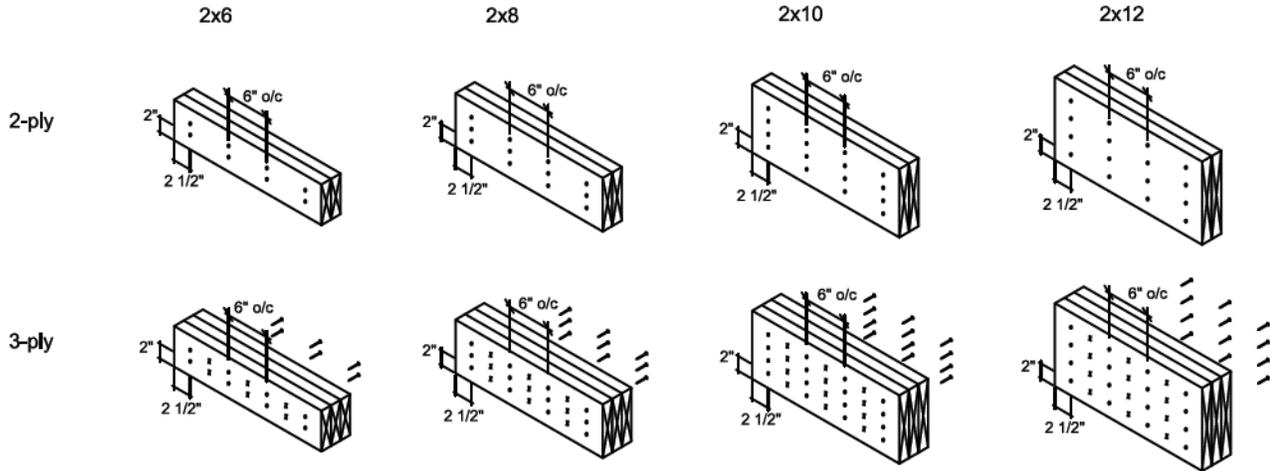


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These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, 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	2021-02-04
Sewage System			
Zoning			

Conventional Connections



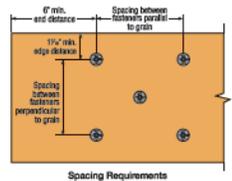
Conventional connection notes:

- 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.

SIMPSON SDW SPACING REQUIREMENT

Table 9 – Spacing Requirements

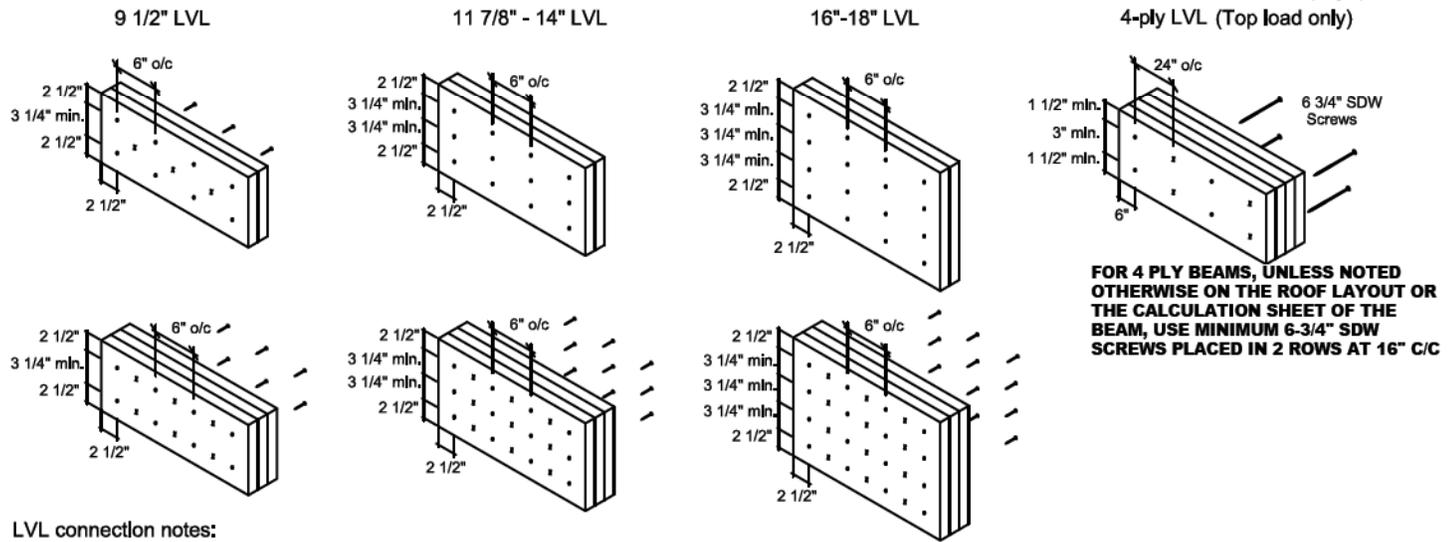
Geometry	Minimum Dimensions (in.)	
	D-F-L	S-F-F
Spacing parallel to grain	6	5
End distance parallel to grain	6	6
Spacing perpendicular to grain	3	2 1/2
Edge distance perpendicular to grain	1 1/4	1 1/4



1. Additional screws may be staggered diagonally between rows.

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.

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



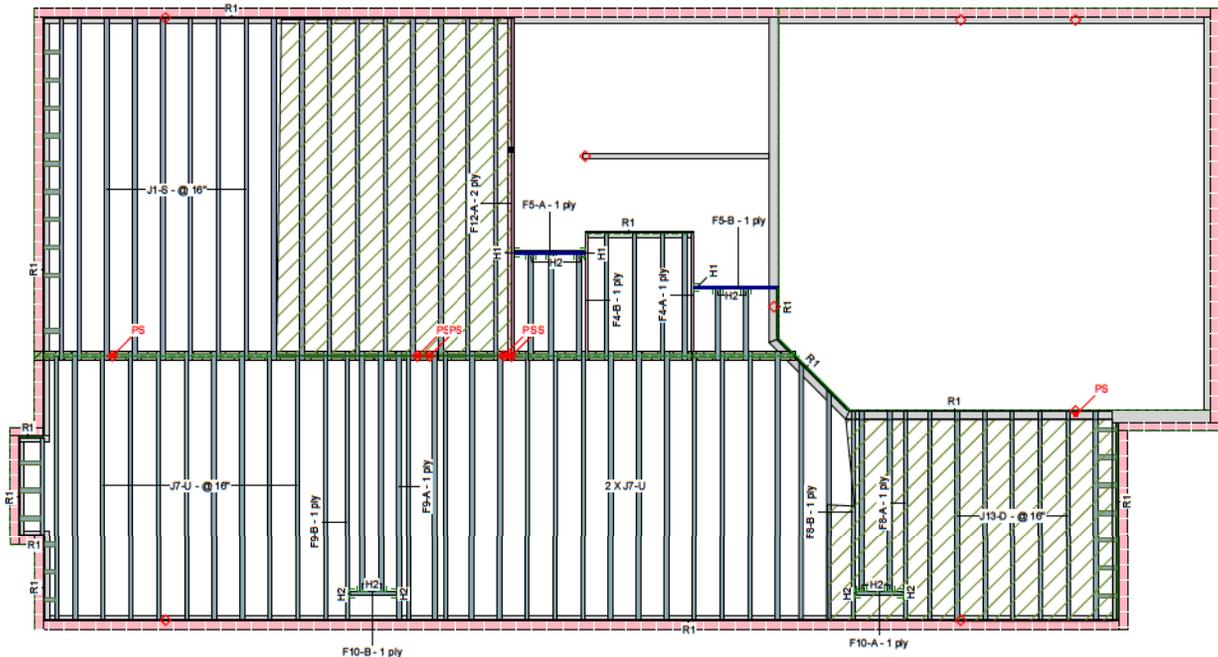
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Inc.
8 Moodie Drive
wa, ON
L7V1
-838-2775



Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

Ground Floor



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.

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

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

Ground Floor LVL/JL/L

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F12	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	18-0-0
F4	Forex 2.0E-3000Fb LVL	1.75	11.875			2	8-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	11.875			2	4-0-0

I Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F9	AJS 140	2.5	11.875			2	14-0-0
F8	AJS 140	2.5	11.875			2	10-0-0
F10	AJS 140	2.5	11.875			2	4-0-0
J7	AJS 140	2.5	11.875			27	14-0-0
J14	AJS 140	2.5	11.875			3	12-0-0
J13	AJS 140	2.5	11.875			9	10-0-0
J11	AJS 140	2.5	11.875			4	8-0-0
J3	AJS 140	2.5	11.875			4	6-0-0
J2	AJS 140	2.5	11.875			2	4-0-0
J1	AJS 20	2.5	11.875			17	18-0-0

Rim Board

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

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 140	2.5	11.875	LinR		Varies	43-0-0

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	Supported Member
H1	3	HUS1.81/10			30 16d	10 16d
H2	13	LF2511			12 10d	1 #8x1 1/4WS

Deflection Joist

Label	Member	LL Span L/	TL Span L/	LL Cant 2L/	TL Cant 2L/
H1		480	360	480	360

Deflection Girder

Label	Member	LL Span L/	TL Span L/	LL Cant 2L/	TL Cant 2L/
H2		360	240	480	360

- Decking**
- | Label | Thickness | Fastener |
|-------|-----------|----------------|
| OSB | 3/4" | Nailed & Glued |
- Vibration**
- Strapping 1"x4", 1 Row at Mdsplan
- CCMC References**
- Boise - 12472-R, 12787-R
 - P. - 12412-R
 - Forex - 14056-R

Legend

PS	Point Load Support
◊	Load from Above
█	Wall
█	Norbord Rimboard Plus 1.125 X 11.875
█	AJS 140 11.875
█	AJS 20 11.875
█	Forex 2.0E-3000Fb LVL 1.75 X 11.875
█	5.25 X 10.25 (Dropped)

JOISTS SPACING 12"O/C UNLESS NOTED OTHERWISE

JOB INFORMATION

Builder

Project

Shipping

GREENPARK HOMES
TRINAR HALL, EAST GWILLIMBURY, ON

Sales Rep

Designer

S B

Plotted

December 17, 2020

Layout Name

BRENTWOOD 2 EL- 1-2-3

Job Path

C:\Data\SAUM\LGREENPARK HOMES\TRINAR HALL\BRENTWOOD 2\FLOOR\EL-1\WITH AJS140\BRENTWOOD 2 EL- 1.jal

DESIGN CRITERIA

Ground Floor

Design Method LSD (Canada)

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/	360

Decking

OSB	3/4"
Fastener	Nailed & Glued

Vibration

Strapping 1"x4", 1 Row at Mdsplan

CCMC References

- Boise - 12472-R, 12787-R
- P. - 12412-R
- Forex - 14056-R

Kott Inc.

3228 Moodie Dr, Ottawa
14 Anderson Blvd, Uxbridge,
Ontario

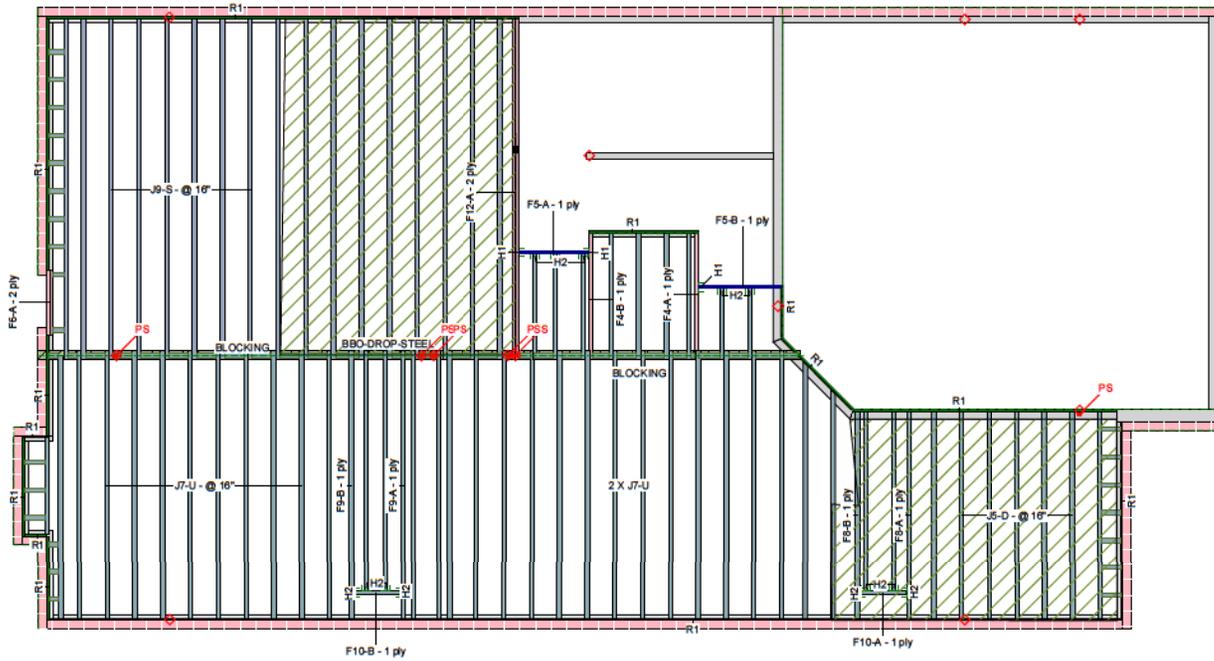
613-839-2775 /
905-642-4400



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

Ground Floor



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

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Ground Floor LVL/L SL

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F12	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	18-0-0
F4	Forex 2.0E-3000Fb LVL	1.75	11.875			2	8-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	11.875			2	4-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	4-0-0

I Joist

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F9	AJS 140	2.5	11.875			2	14-0-0
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J3	AJS 140	2.5	11.875			4	6-0-0
J2	AJS 140	2.5	11.875			2	4-0-0
J9	AJS 20	2.5	11.875			17	18-0-0

Rim Board

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

Blocking

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
BLK1	AJS 140	2.5	11.875	LinR		Varies	42-0-0

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	Supported Member
H1	3	HUS1.81/10			30 16d	10 16d
H2	13	LF2511			12 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
- Showers 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.

Legend

PS	Point Load Support
◇	Load from Above
Wall	Wall
Norbord Rimboard Plus 1.125 X 11.875	Norbord Rimboard Plus 1.125 X 11.875
AJS 140 11.875	AJS 140 11.875
AJS 20 11.875	AJS 20 11.875
Forex 2.0E-3000Fb LVL 1.75 X 11.875	Forex 2.0E-3000Fb LVL 1.75 X 11.875
5.25 X 10.25 (Dropped)	5.25 X 10.25 (Dropped)

JOISTS SPACING 12" O/C UNLESS NOTED OTHERWISE

JOB INFORMATION

Builder
Project
Shipping
GREENPARK HOMES
TRINAR HALL, EAST GWILLIMBURY, ON
Designer
S B
Plotted
December 17, 2020
Layout Name
BRENTWOOD-2 EL-1-2-3 DECK CONDITION
Job Path
C:\Data\SAUML\GREENPARK HOMES\TRINAR HALL\BRENTWOOD 2\FLOOR\EL-1\DECK CONDITION\WITH AJS 140\BRENTWOOD-2 EL-1-2-3

DESIGN CRITERIA

Ground Floor
Design Method LSD (Canada)
Building Code NBCC 2015 / OBC 2012
Floor Loads
Live 40
Dead 15
Deflection Joist
LL Span L/ 360
TL Span L/ 360
LL Cant 2L/ 480
TL Cant 2L/ 360
Deflection Girder
LL Span L/ 360
TL Span L/ 240
LL Cant 2L/ 480
TL Cant 2L/ 360
Decking
OSB
Thickness 3/4"
Fastener Nailed & Glued
Vibration
Strapping 1" X 4", 1 Row at Mdsplan

CCMC References

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

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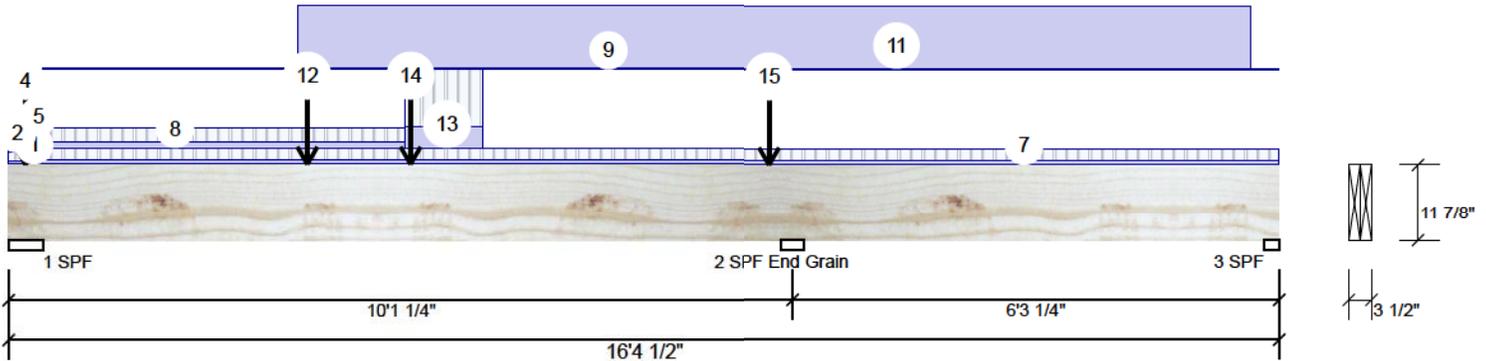
Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			



Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2-3 DECK CONDITION
 Project #:

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



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	1647	853	0	0
2	1673	1550	0	0
3	0 (-279)	44	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	31%	1051 / 2451	3502	L_	1.25D+1.5L
2 - SPF	3.500"	50%	1976 / 2573	4549	LL	1.25D+1.5L
End Grain						
3 - SPF	2.375"	3%	31 / 65.97 (-498)		_L	1.25D+1.5L (0.9D+1.5L)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-5225 ft-lb	10'1 1/4"	34261 ft-lb	0.153 (15%)	1.25D+1.5L	LL
Unbraced	-5225 ft-lb	10'1 1/4"	29859 ft-lb	0.175 (17%)	1.25D+1.5L	LL
Pos Moment	8316 ft-lb	3'10 1/8"	34261 ft-lb	0.243 (24%)	1.25D+1.5L	L_
Unbraced	8316 ft-lb	3'10 1/8"	29859 ft-lb	0.279 (28%)	1.25D+1.5L	L_
Shear	2759 lb	9'1 3/8"	11596 lb	0.238 (24%)	1.25D+1.5L	LL
Perm Defl in.	0.034 (L/3421)	4'8 1/16"	0.324 (L/360)	0.110 (11%)	D	Uniform
LL Defl inch	0.060 (L/1948)	4'5 3/8"	0.324 (L/360)	0.180 (18%)	L	L_
TL Defl inch	0.094 (L/1242)	4'6 5/16"	0.486 (L/240)	0.190 (19%)	D+L	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

- 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 498 lb (Combination 0.9D+1.5L, Load Case L_).
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on full section width.



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Sewage System			
Zoning			

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



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

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

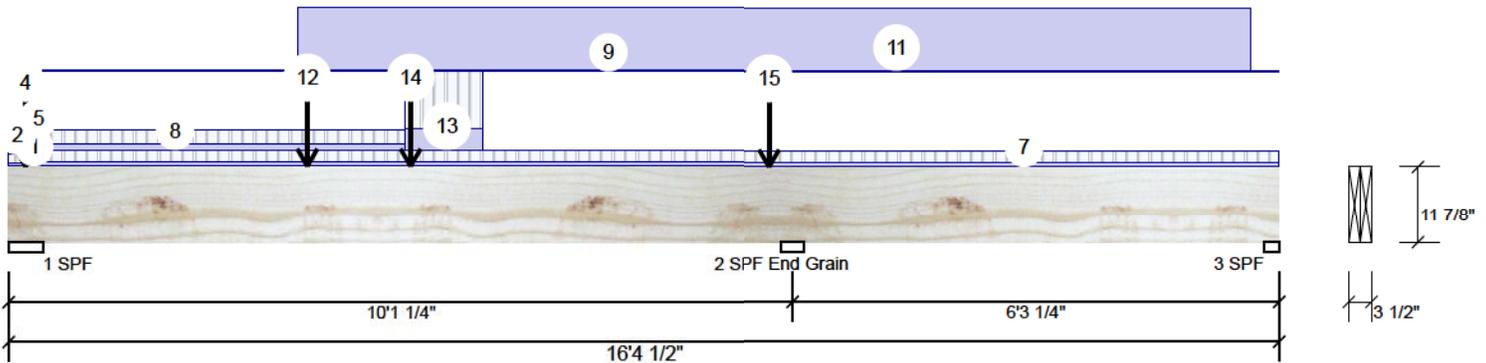
This design is valid until 4/24/2023



Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2-3 DECK CONDITION
 Project #:

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-4	0-3-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-5-4	0-4-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-2-10		Top	190 lb	453 lb	0 lb	0 lb	B7 B7
4	Point	0-2-10		Top	20 lb	0 lb	0 lb	0 lb	Wall Self Weight
5	Part. Uniform	0-2-13 to 0-5-4		Top	1 PLF	0 PLF	0 PLF	0 PLF	
7	Tie-In	0-5-4 to 16-4-8	0-4-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
8	Tie-In	0-5-4 to 5-1-3	0-5-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
9	Part. Uniform	0-5-4 to 16-4-8		Top	2 PLF	0 PLF	0 PLF	0 PLF	
11	Part. Uniform	3-8-10 to 16-0-2		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
12	Point	3-10-2		Top	683 lb	1672 lb	0 lb	0 lb	B7 B7
13	Tie-In	5-1-3 to 6-1-5	1-9-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
14	Point	5-2-1		Near Face	108 lb	268 lb	0 lb	0 lb	F5
15	Point	9-9-10		Top	121 lb	239 lb	0 lb	0 lb	B6 B6
	Self Weight				10 PLF				

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Zoning			

This design is valid until 4/24/2023

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CSD | DRAW DESIGN BUILD

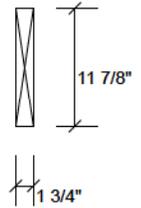
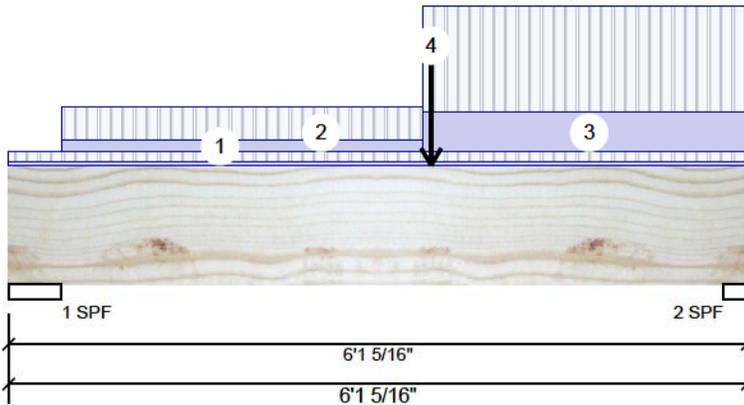


Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2-3 DECK CONDITION
 Project #:

F4-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	364	156	0	0
2	512	211	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.250"	13%	195 / 546	741 L	1.25D+1.5L
2 - SPF	2.375"	40%	264 / 768	1032 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1965 ft-lb	3'5 15/16"	17130 ft-lb	0.115 (11%)	1.25D+1.5L	L
Unbraced	1965 ft-lb	3'5 15/16"	8030 ft-lb	0.245 (24%)	1.25D+1.5L	L
Shear	836 lb	4'11 13/16"	5798 lb	0.144 (14%)	1.25D+1.5L	L
Perm Defl in. (L/11103)	0.006	3'5 15/16"	0.187 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch (L/4538)	0.015	3'5 15/16"	0.187 (L/360)	0.080 (8%)	L	L
TL Defl inch (L/3221)	0.021	3'5 15/16"	0.280 (L/240)	0.070 (7%)	D+L	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.
- 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 6-1-5	0-2-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-5-4 to 3-5-1	0-7-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	3-5-1 to 6-1-5	1-11-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	3-5-15		Near Face	215 lb	549 lb	0 lb	0 lb	F5
	Self Weight				5 PLF				



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
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

- 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

This design is valid until 4/24/2023

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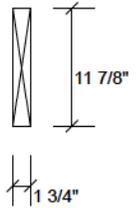
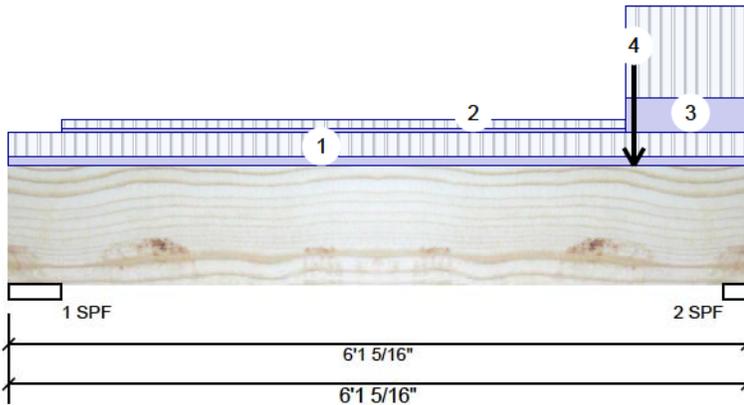


Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2-3 DECK CONDITION
 Project #:

F4-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	128	64	0	0
2	390	167	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	5%	80 / 192	272	L	1.25D+1.5L
2 - SPF	2.375"	31%	209 / 585	794	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	562 ft-lb	4'9 1/8"	17130 ft-lb	0.033 (3%)	1.25D+1.5L	L
Unbraced	562 ft-lb	4'9 1/8"	8030 ft-lb	0.070 (7%)	1.25D+1.5L	L
Shear	599 lb	4'11 13/16"	5798 lb	0.103 (10%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/33372)	3'6 5/8"	0.187 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.004 (L/15426)	3'7 1/2"	0.187 (L/360)	0.020 (2%)	L	L
TL Defl inch	0.006 (L/10551)	3'7 3/16"	0.280 (L/240)	0.020 (2%)	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 6-1-5	0-5-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-5-4 to 5-1-3	0-2-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	5-1-3 to 6-1-5	1-9-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	5-2-1		Far Face	118 lb	292 lb	0 lb	0 lb	F5
	Self Weight				5 PLF				



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
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

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 4/24/2023

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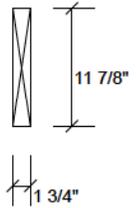
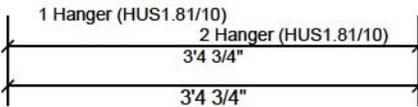
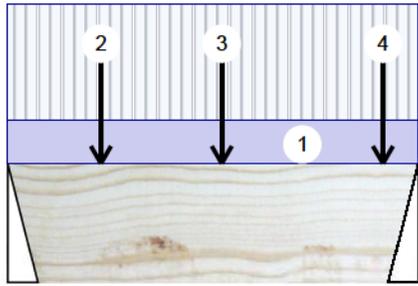


Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2-3 DECK CONDITION
 Project #:

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

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	268	108	0	0
2	292	118	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total Ld. Case	Ld. Comb.
1 - Hanger	3.000"	14%	135 / 401	537 L	1.25D+1.5L
2 - Hanger	3.000"	15%	147 / 438	585 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	413 ft-lb	1'9 1/4"	17130 ft-lb	0.024 (2%)	1.25D+1.5L	L
Unbraced	413 ft-lb	1'9 1/4"	13730 ft-lb	0.030 (3%)	1.25D+1.5L	L
Shear	393 lb	2'2 5/8"	5798 lb	0.068 (7%)	1.25D+1.5L	L
Perm Defl in. (L/50245)	0.001	1'9 1/4"	0.101 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch (L/20138)	0.002	1'9 1/4"	0.101 (L/360)	0.020 (2%)	L	L
TL Defl inch (L/14376)	0.003	1'9 1/4"	0.151 (L/240)	0.020 (2%)	D+L	L

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



Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-4-12		Top	30 PLF	80 PLF	0 PLF	0 PLF	
2	Point	0-9-4		Near Face	35 lb	93 lb	0 lb	0 lb	J3
3	Point	1-9-4		Near Face	42 lb	113 lb	0 lb	0 lb	J3
4	Point	3-1-4		Near Face	31 lb	82 lb	0 lb	0 lb	J3
	Self Weight				5 PLF				



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
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

This design is valid until 4/24/2023

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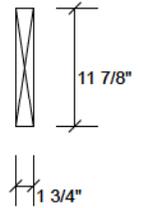
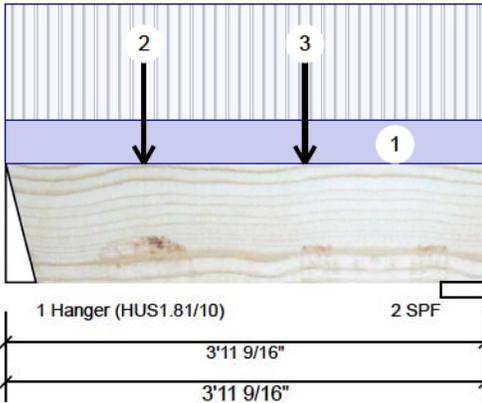
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Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2-3 DECK CONDITION
 Project #:

F5-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	549	215	0	0
2	568	223	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	28%	269 / 824	1093	L	1.25D+1.5L
2 - SPF	4.375"	24%	278 / 851	1130	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	897 ft-lb	1'11 7/16"	17130 ft-lb	0.052 (5%)	1.25D+1.5L	L
Unbraced	897 ft-lb	1'11 7/16"	12633 ft-lb	0.071 (7%)	1.25D+1.5L	L
Shear	530 lb	1'2 1/8"	5798 lb	0.091 (9%)	1.25D+1.5L	L
Perm Defl in. (L/23565)	0.002	1'11 1/4"	0.116 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch (L/9215)	0.005	1'11 1/4"	0.116 (L/360)	0.040 (4%)	L	L
TL Defl inch (L/6625)	0.006	1'11 1/4"	0.174 (L/240)	0.040 (4%)	D+L	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

- Fill all hanger nailing holes.
- 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	Part. Uniform	0-0-0 to 3-11-9		Top	90 PLF	240 PLF	0 PLF	0 PLF	
2	Point	1-1-11		Near Face	30 lb	80 lb	0 lb	0 lb	J2
3	Point	2-5-11		Near Face	32 lb	85 lb	0 lb	0 lb	J2
	Self Weight				5 PLF				



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
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

- 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

This design is valid until 4/24/2023

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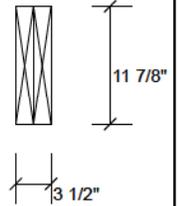
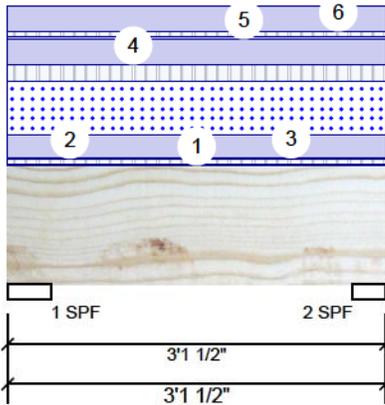


Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2-3 DECK CONDITION
 Project #:

F6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	
Floor Live:	40 PSF
Dead:	15 PSF

Application:	Floor (Residential)
Design Method:	LSD
Building Code:	NBCC 2015 / OBC 2012
Load Sharing:	No
Deck:	Not Checked
Vibration:	Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	134	411	273	0
2	127	388	259	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.261"	12%	513 / 543	1057	L	1.25D+1.5S +L
2 - SPF	3.251"	15%	486 / 515	1000	L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	567 ft-lb	1'7 1/4"	32890 ft-lb	0.017 (2%)	1.25D+1.5S +L	L
Unbraced	567 ft-lb	1'7 1/4"	32890 ft-lb	0.017 (2%)	1.25D+1.5S +L	L
Shear	212 lb	1'11 1/8"	11132 lb	0.019 (2%)	1.25D+1.5S +L	L
Perm Defl in.	0.001 (L/35421)	1'7 5/16"	0.088 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.001 (L/42743)	1'7 5/16"	0.088 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.002 (L/19370)	1'7 5/16"	0.131 (L/240)	0.010 (1%)	D+S+0.5L	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.
- 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 3-1-8	0-4-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 1-0-5		Top	1 PLF	0 PLF			
3	Part. Uniform	0-0-0 to 3-1-8		Top	73 PLF	51 PLF			



Continued on page 2...

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

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 4/24/2023

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Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

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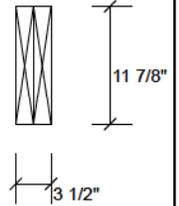
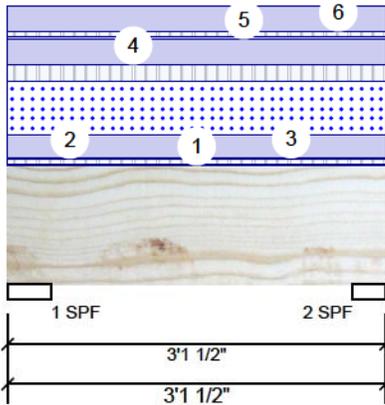


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 TRINAR HALL, EAST GWILLIMBURY, ON

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 Job Name: BRENTWOOD- 2 EL-1-2-3 DECK CONDITION
 Project #:

F6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	0-0-0 to 3-1-8		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Tapered Start	0-0-0		Top	7 PLF	17 PLF	0 PLF	0 PLF	
	End	3-1-8			7 PLF	17 PLF	0 PLF	0 PLF	
6	Part. Uniform	0-0-0 to 3-1-8		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				10 PLF				

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



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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 4/24/2023

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



Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			



F10-A

BC CALC® Member Report

Dry | 1 span | No cant.

December 17, 2020 10:28:07

Build 7364

Job name:

File name: C:\Data\SAUMIL\GREENP...-3 DECK CONDITION.isl

Address:

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

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

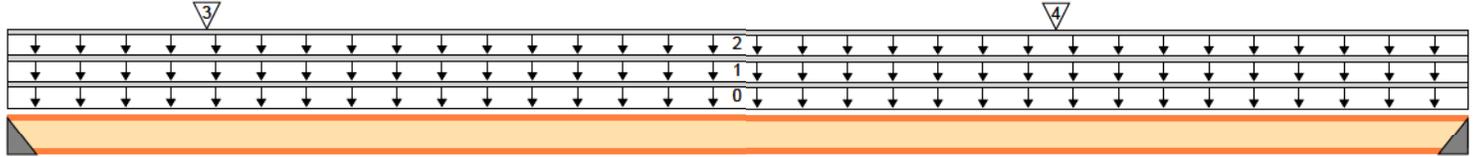
Customer:

Designer: S B

Code reports:

CCMC 12787-R

Company:



02-03-08

B1

B2

Total Horizontal Product Length = 02-03-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	208 / 0	105 / 0		
B2, 2"	175 / 0	89 / 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	02-03-08	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	02-03-08	Top		3			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	02-03-08	Top	26	10			n/a
3	J5	Conc. Pt. (lbs)	L	00-03-12	00-03-12	Back	148	72			n/a
4	J5	Conc. Pt. (lbs)	L	01-07-12	01-07-12	Back	176	87			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	190 ft-lbs	5305 ft-lbs	3.6%	1	01-07-12
End Reaction	443 lbs	1607 lbs	27.6%	1	00-00-00
End Shear	434 lbs	2350 lbs	18.5%	1	00-02-00
Total Load Deflection	L/999 (0.002")	n/a	n/a	4	01-07-12
Live Load Deflection	L/999 (0.001")	n/a	n/a	5	01-07-12
Max Defl.	0.002"	n/a	n/a	4	01-07-12
Span / Depth	2.1				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 2-1/2"	443 lbs	20.0%	27.6%	LF2511
B2	Hanger 2" x 2-1/2"	373 lbs	16.9%	23.2%	LF2511

Cautions

Hanger LF2511 requires (12) 10dx1.5 face nails, (1) #8x1.25 joist nails.

Header for the hanger LF2511 is a Single 2-1/2" x 11-7/8" I-joist

Header for the hanger LF2511 is a Single 2-1/2" x 11-7/8" I-joist

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

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

F10-A

Dry | 1 span | No cant.

December 17, 2020 10:28:07

BC CALC® Member Report

Build 7364

Job name:

File name: C:\Data\SAUMIL\GREENP...-3 DECK CONDITION.isl

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

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

Customer:

Designer: S B

Code reports: CCMC 12787-R

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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Disclosure

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

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

F10-B

Dry | 1 span | No cant.

December 17, 2020 10:28:07

BC CALC® Member Report

Build 7364

Job name:

File name: C:\Data\SAUMIL\GREENP...-3 DECK CONDITION.isl

Address:

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

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

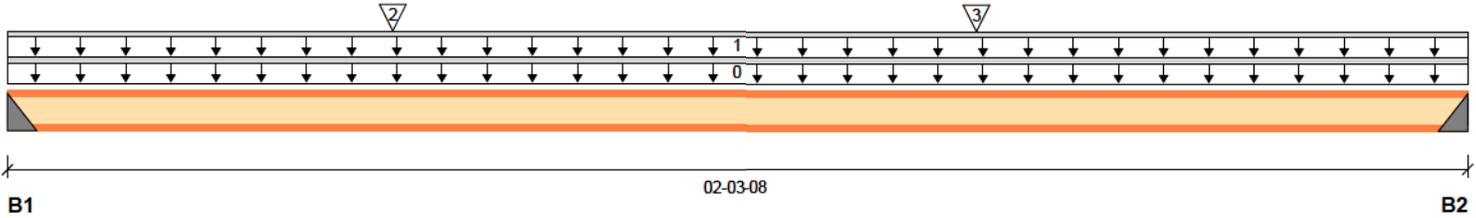
Customer:

Designer: S B

Code reports:

CCMC 12787-R

Company:



Total Horizontal Product Length = 02-03-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	233 / 0	91 / 0		
B2, 2"	211 / 0	82 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
							1.00	0.65	1.00	1.15	
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	02-03-08	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	02-03-08	Top	26	10			n/a
2	J6	Conc. Pt. (lbs)	L	00-07-04	00-07-04	Back	183	69			n/a
3	J6	Conc. Pt. (lbs)	L	01-06-04	01-06-04	Back	202	76			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	263 ft-lbs	5305 ft-lbs	5.0%	1	01-06-04
End Reaction	463 lbs	1607 lbs	28.8%	1	00-00-00
End Shear	454 lbs	2350 lbs	19.3%	1	00-02-00
Total Load Deflection	L/999 (0.003")	n/a	n/a	4	01-04-14
Live Load Deflection	L/999 (0.002")	n/a	n/a	5	01-05-02
Max Defl.	0.003"	n/a	n/a	4	01-04-14
Span / Depth	2.1				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 2-1/2"	463 lbs	20.9%	28.8%	LF2511
B2	Hanger 2" x 2-1/2"	419 lbs	18.9%	26.0%	LF2511



Cautions

Hanger LF2511 requires (12) 10dx1.5 face nails, (1) #8x1.25 joist nails.

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Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

REFER TO MULTIPLE CONNECTION DETAIL NAILING OR BOLTING.
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F10-B

Dry | 1 span | No cant.

December 17, 2020 10:28:07

BC CALC® Member Report

Build 7364

Job name:

File name: C:\Data\SAUMIL\GREENP...-3 DECK CONDITION.isl

Address:

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

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

Customer:

Designer: S B

Code reports:

CCMC 12787-R

Company:

Notes

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- 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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Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

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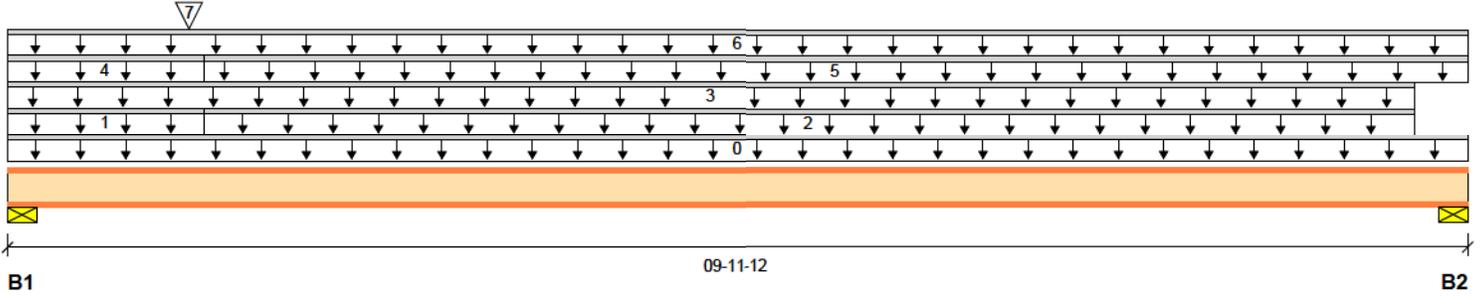
F8-A

BC CALC® Member Report
Build 7364
Job name:
Address: GREENPARK HOMES
TRINA...LL,EAST GWILLIMBURY,ON
City, Province, Postal Code:
Customer:
Code reports: CCMC 12787-R

Dry | 1 span | No cant.

December 17, 2020 10:28:07

File name: C:\Data\SAUMIL\GREENP...-3 DECK CONDITION.isl
Description: Level - Ground Floor
Specifier:
Designer: S B
Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	387 / 0	208 / 0		
B2, 4-3/8"	217 / 0	121 / 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	09-11-12	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top		6			n/a
2		Unf. Lin. (lb/ft)	L	01-04-02	09-07-06	Top		2			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	09-07-06	Top		3			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top	50	19			n/a
5		Unf. Lin. (lb/ft)	L	01-04-02	09-11-12	Top	15	6			n/a
6		Unf. Lin. (lb/ft)	L	00-00-00	09-11-12	Top	23	9			n/a
7	F10	Conc. Pt. (lbs)	L	01-02-14	01-02-14	Back	175	89			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1213 ft-lbs	5305 ft-lbs	22.9%	1	04-03-10
End Reaction	840 lbs	1684 lbs	49.9%	1	00-00-00
End Shear	809 lbs	2350 lbs	34.4%	1	00-02-06
Total Load Deflection	L/999 (0.058")	n/a	n/a	4	04-07-11
Live Load Deflection	L/999 (0.038")	n/a	n/a	5	04-07-11
Max Defl.	0.058"	n/a	n/a	4	04-07-11
Span / Depth	9.6				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	840 lbs	23.0%	49.9%	Spruce-Pine-Fir
B2	Wall/Plate 4-3/8" x 2-1/2"	477 lbs	7.1%	24.9%	Spruce-Pine-Fir



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Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

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F8-A

Dry | 1 span | No cant.

December 17, 2020 10:28:07

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

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

File name: C:\Data\SAUMIL\GREENP...-3 DECK CONDITION.isl
Description: Level - Ground Floor
Specifier:
Designer: S B
Company:

Notes

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- Design meets User specified (1") Maximum Total load deflection criteria.
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- Calculations assume member is fully braced.
- 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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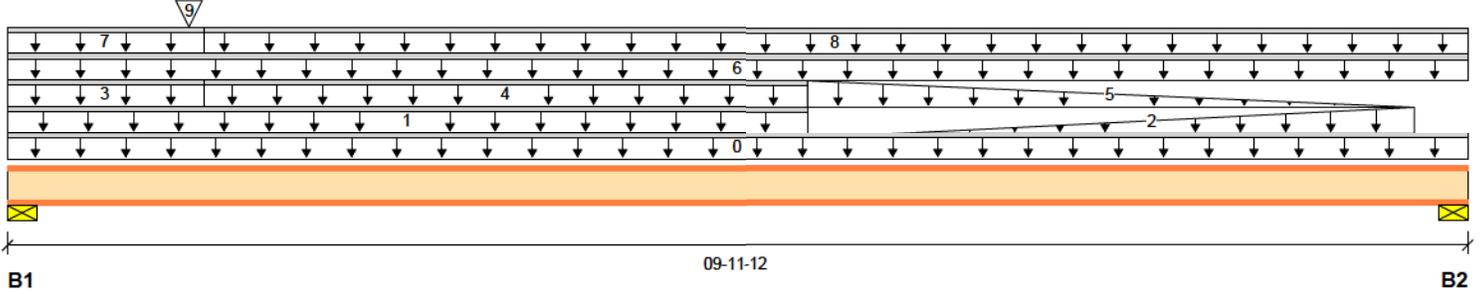
F8-B

BC CALC® Member Report
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Dry | 1 span | No cant.

December 17, 2020 10:28:07

File name: C:\Data\SAUMIL\GREENP...-3 DECK CONDITION.isl
Description: Level - Ground Floor
Specifier:
Designer: S B
Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	392 / 0	206 / 0		
B2, 4-3/8"	188 / 0	97 / 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	09-11-12	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	05-05-10	Top		3			n/a
2		Trapezoidal (lb/ft)	L	06-00-08		Top		0			n/a
					09-07-06			2			
3		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top		6			n/a
4		Unf. Lin. (lb/ft)	L	01-04-02	05-05-10	Top		1			n/a
5		Trapezoidal (lb/ft)	L	05-05-10		Top		1			n/a
					09-07-06			0			
6		Unf. Lin. (lb/ft)	L	00-00-00	09-11-12	Top	23	9			n/a
7		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top	50	19			n/a
8		Unf. Lin. (lb/ft)	L	01-04-02	09-11-12	Top	8	3			n/a
9	F10	Conc. Pt. (lbs)	L	01-02-14	01-02-14	Front	208	105			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1090 ft-lbs	5305 ft-lbs	20.6%	1	04-00-10
End Reaction	846 lbs	1684 lbs	50.2%	1	00-00-00
End Shear	815 lbs	2350 lbs	34.7%	1	00-02-06
Total Load Deflection	L/999 (0.052")	n/a	n/a	4	04-06-13
Live Load Deflection	L/999 (0.034")	n/a	n/a	5	04-06-13
Max Defl.	0.052"	n/a	n/a	4	04-06-13
Span / Depth	9.6				



Bearing Supports

Bearing	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Mat
B1	Wall/Plate 2-3/8" x 2-1/2"	846 lbs	23.2%	50.2%	Spr
B2	Wall/Plate 4-3/8" x 2-1/2"	403 lbs	6.0%	21.1%	Spr



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

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F8-B

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December 17, 2020 10:28:07

BC CALC® Member Report
Build 7364
Job name:
Address: GREENPARK HOMES
TRINA...LL,EAST GWILLIMBURY,ON
City, Province, Postal Code:
Customer:
Code reports: CCMC 12787-R

File name: C:\Data\SAUMIL\GREENP...-3 DECK CONDITION.isl
Description: Level - Ground Floor
Specifier:
Designer: S B
Company:

Notes

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- Importance Factor : Normal Part code : Part 9

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code-accepted design
s and analysis methods.
in of Boise Cascade
ad wood products must be in
ce with current Installation
d applicable building codes. To
stallation Guide or ask
s, please call (800)232-0788
stallation.

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

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

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

F9-A

Dry | 1 span | No cant.

December 17, 2020 10:28:07

BC CALC® Member Report

Build 7364

Job name:

File name: C:\Data\SAUMIL\GREENP...-3 DECK CONDITION.isl

Address:

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

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

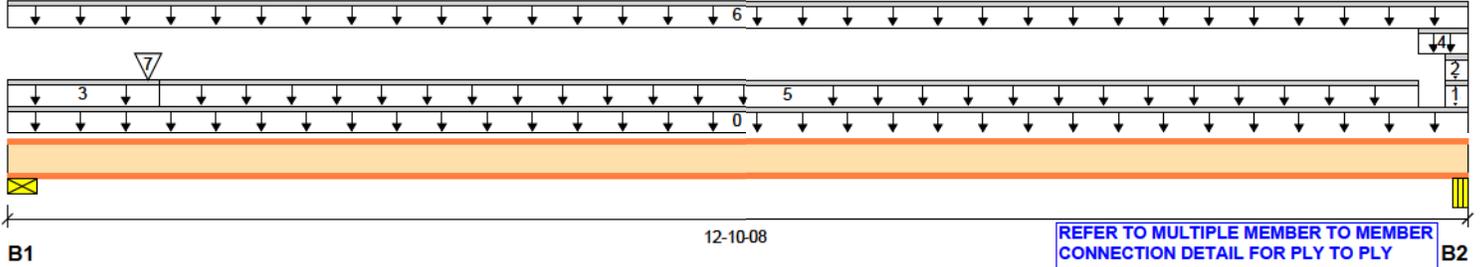
Customer:

Designer: S B

Code reports:

CCMC 12787-R

Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	402 / 0	169 / 0		
B2, 5-1/4"	194 / 0	90 / 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	12-10-08	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	12-08-01	12-10-08	Top		2			n/a
2		Unf. Lin. (lb/ft)	L	12-08-01	12-10-08	Top		1			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top	50	19			n/a
4		Unf. Lin. (lb/ft)	L	12-05-04	12-10-08	Top	13	5			n/a
5		Unf. Lin. (lb/ft)	L	01-04-02	12-05-04	Top	18	7			n/a
6		Unf. Lin. (lb/ft)	L	00-00-00	12-10-08	Top	9	3			n/a
7	F10	Conc. Pt. (lbs)	L	01-02-14	01-02-14	Back	211	82			n/a

Controls Summary

Pos. Moment	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1334 ft-lbs	5305 ft-lbs	25.1%	1	05-07-05
End Reaction	815 lbs	1684 lbs	48.4%	1	00-00-00
End Shear	791 lbs	2350 lbs	33.7%	1	00-02-06
Total Load Deflection	L/999 (0.098")	n/a	n/a	4	06-01-00
Live Load Deflection	L/999 (0.068")	n/a	n/a	5	06-01-00
Max Defl.	0.098"	n/a	n/a	4	06-01-00
Span / Depth	12.5				

Bearing Supports

Bearing Supports	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	815 lbs	22.3%	48.4%	Spruce-Pine-Fir
B2	Beam 5-1/4" x 2-1/2"	403 lbs	5.0%	21.1%	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
- 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	2021-02-04
Sewage System			
Zoning			

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F9-B

BC CALC® Member Report

Dry | 1 span | No cant.

December 17, 2020 10:28:07

Build 7364

Job name:

File name: C:\Data\SAUMIL\GREENP...-3 DECK CONDITION.isl

Address:

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

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

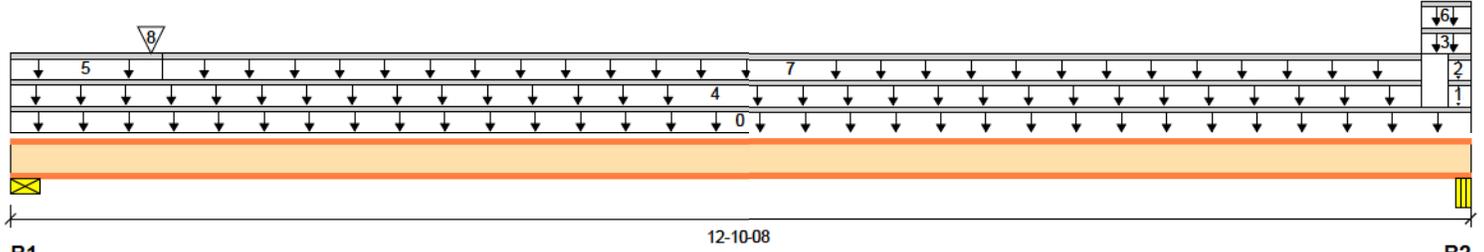
Customer:

Designer: S B

Code reports:

CCMC 12787-R

Company:



Total Horizontal Product Length = 12-10-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	479 / 0	199 / 0		
B2, 5-1/4"	249 / 0	111 / 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	12-10-08	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	12-08-01	12-10-08	Top		2			n/a
2		Unf. Lin. (lb/ft)	L	12-08-01	12-10-08	Top		1			n/a
3		Unf. Lin. (lb/ft)	L	12-05-04	12-10-08	Top	17	6			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	12-05-04	Top	21	8			n/a
5		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top	50	19			n/a
6		Unf. Lin. (lb/ft)	L	12-05-04	12-10-08	Top	10	4			n/a
7		Unf. Lin. (lb/ft)	L	01-04-02	12-05-04	Top	14	5			n/a
8	F10	Conc. Pt. (lbs)	L	01-02-14	01-02-14	Front	233	91			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1673 ft-lbs	5305 ft-lbs	31.5%	1	05-07-05
End Reaction	968 lbs	1684 lbs	57.4%	1	00-00-00
End Shear	939 lbs	2350 lbs	40.0%	1	00-02-06
Total Load Deflection	L/999 (0.123")	n/a	n/a	4	06-01-00
Live Load Deflection	L/999 (0.086")	n/a	n/a	5	06-01-00
Max Defl.	0.123"	n/a	n/a	4	06-01-00
Span / Depth	12.5				



Bearing Supports

Bearing	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	968 lbs	26.5%	57.4%	Spruce-Pine-Fir
B2	Beam 5-1/4" x 2-1/2"	512 lbs	6.3%	26.7%	Spruce-Pine-Fir



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Sewage System			
Zoning			

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F9-B

Dry | 1 span | No cant.

December 17, 2020 10:28:07

BC CALC® Member Report
Build 7364
Job name:
Address: GREENPARK HOMES
TRINA...LL,EAST GWILLIMBURY,ON
City, Province, Postal Code:
Customer:
Code reports: CCMC 12787-R

File name: C:\Data\SAUMIL\GREENP...-3 DECK CONDITION.isl
Description: Level - Ground Floor
Specifier:
Designer: S B
Company:

Notes

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- Design meets Code minimum (L/360) Live load deflection criteria.
- Design meets User specified (1") Maximum Total load deflection criteria.
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- Design based on Dry Service Condition.
- Importance Factor : Normal Part code : Part 9

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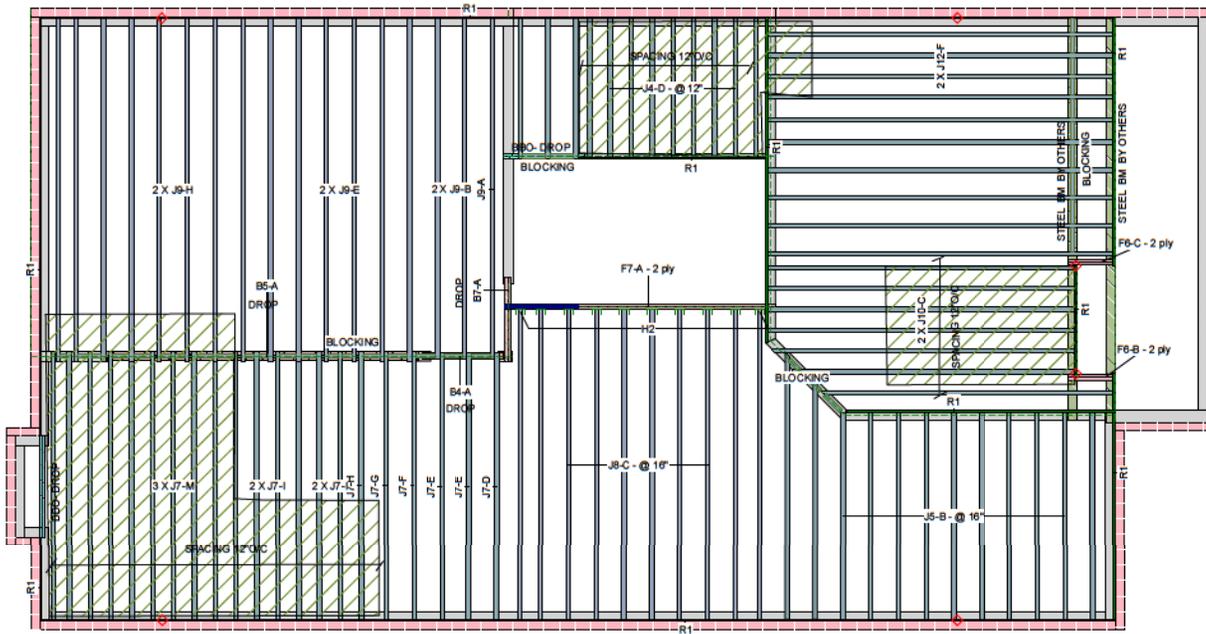
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d applicable building codes. To
stallation Guide or ask
, please call (800)232-0788
stallation.

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

Second Floor							
LVL/L SL (Flush)							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F7	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	14-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875	2	2	4	4-0-0
LVL/L SL (Dropped)							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
B4	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	4-0-0
B5	Forex 2.0E-3000Fb LVL	1.75	11.875	1	3	3	16-0-0
B7	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	4-0-0
I Joist (Flush)							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
J12	AJS 140	2.5	11.875			10	18-0-0
J10	AJS 140	2.5	11.875			6	16-0-0
J7	AJS 140	2.5	11.875			23	14-0-0
J6	AJS 140	2.5	11.875			1	12-0-0
J5	AJS 140	2.5	11.875			10	10-0-0
J4	AJS 140	2.5	11.875			12	8-0-0
J9	AJS 20	2.5	11.875			17	18-0-0
J8	AJS 20	2.5	11.875			10	16-0-0
Rim Board							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			17	12-0-0
Blocking							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
BLK1	AJS 140	2.5	11.875	LinR		Varies	28-0-0
Hanger							
Label	Pcs	Description	Skew	Slope	fasteners	Supported Member	
H2	10	LF2511			12 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
- Showers 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.

Legend

PS	Point Load Support
◊	Load from Above
▬	Wall
▬	Norbord Rimboard Plus 1.125 X 11.875
▬	AJS 140 11.875
▬	AJS 20 11.875
▬	Forex 2.0E-3000Fb LVL 1.75 X 9.5 (Dropped)
▬	Forex 2.0E-3000Fb LVL 1.75 X 11.875 (Dropped)
▬	Forex 2.0E-3000Fb LVL 1.75 X 11.875
▬	1.5 X 9.5 (Dropped)
▬	1.75 X 9.5 (Dropped)
▬	5.25 X 10.25 (Dropped)

JOISTS SPACING 12" O/C UNLESS NOTED OTHERWISE

JOB INFORMATION	
Builder	
Project	
Shipping	GREENPARK HOMES TRINAR HALL, EAST GWILLIMBURY, ON
Sales Rep	
Designer	SB
Plotted	December 17, 2020
Layout Name	BRENTWOOD-2 EL-1-2
Job Path	C:\Data\SAUML\GREENPARK HOMES\TRINAR HALL\BRENTWOOD 2\FLOOR\EL-1\DECK CONDITION WITH AJS 140\BRENTWOOD-2 EL-1-2
DESIGN CRITERIA	
Second Floor	
Design Method	LSD (Canada)
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/	360
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 Inc.	
3228 Moodie Dr, Ottawa	
14 Anderson Blvd, Uxbridge, Ontario	
613-839-2775 / 905-642-4400	



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Sewage System			
Zoning			

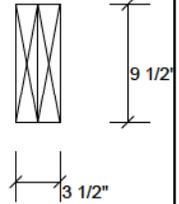
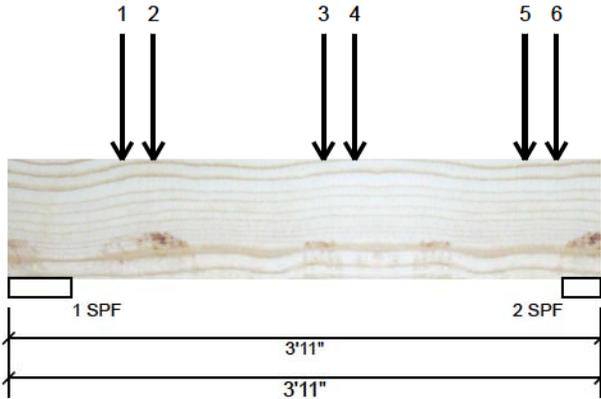


Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2
 Project #:

B4-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	1034	402	0	0
2	1089	422	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.000"	19% 503 / 1551	2053 L	1.25D+1.5L
2 - SPF	3.000"	33% 527 / 1634	2161 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1681 ft-lb	2'1"	22724 ft-lb	0.074 (7%)	1.25D+1.5L	L
Unbraced	1681 ft-lb	2'1"	22724 ft-lb	0.074 (7%)	1.25D+1.5L	L
Shear	1470 lb	1'1 3/4"	9277 lb	0.158 (16%)	1.25D+1.5L	L
Perm Defl in. (L/16922)	0.002	2'1 1/16"	0.112 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch (L/6550)	0.006	2'1 1/16"	0.112 (L/360)	0.050 (5%)	L	L
TL Defl inch (L/4722)	0.009	2'1 1/16"	0.169 (L/240)	0.050 (5%)	D+L	L

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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	0-9-0		Top	159 lb	425 lb	0 lb	0 lb	J9
2	Point	0-11-8		Top	124 lb	332 lb	0 lb	0 lb	J7
3	Point	2-1-0		Top	159 lb	425 lb			
4	Point	2-3-8		Top	124 lb	332 lb			
5	Point	3-5-0		Top	113 lb	303 lb			



Continued on page 2...

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

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 4/24/2023

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Sewage System			
Zoning			

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

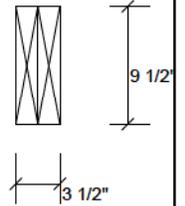
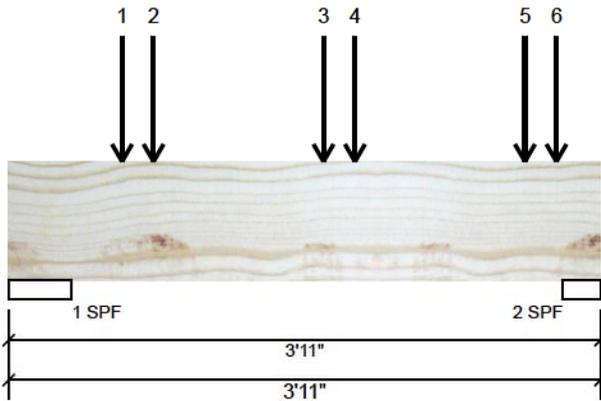




Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2
 Project #:

B4-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
6	Point Self Weight	3-7-8		Top	115 lb 8 PLF	306 lb	0 lb	0 lb	J7

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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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Kott Inc.
 3228 Moodie Dr, Ottawa, Ontario
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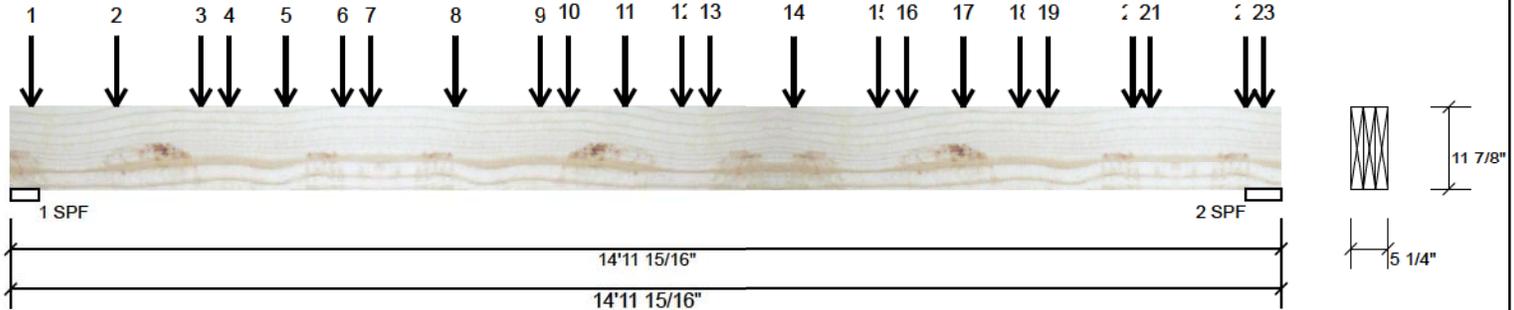


Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2
 Project #:

B5-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder
Plies:	3
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	
Floor Live:	40 PSF
Dead:	15 PSF

Application:	Floor (Residential)
Design Method:	LSD
Building Code:	NBCC 2015 / OBC 2012
Load Sharing:	Yes
Deck:	Not Checked
Vibration:	Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	4028	1788	0	0
2	4124	1719	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.938"	65%	2235 / 6043	8278	L	1.25D+1.5L
2 - SPF	5.000"	52%	2149 / 6185	8334	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	30010 ft-lb	7'2 15/16"	53447 ft-lb	0.561 (56%)	1.25D+1.5L	L
Unbraced	30010 ft-lb	7'2 15/16"	50243 ft-lb	0.597 (60%)	1.25D+1.5L	L
Shear	7979 lb	1'3 1/16"	17394 lb	0.459 (46%)	1.25D+1.5L	L
Perm Defl in.	0.172 (L/1005)	7'4 15/16"	0.479 (L/360)	0.360 (36%)	D	Uniform
LL Defl inch	0.402 (L/429)	7'5 3/8"	0.479 (L/360)	0.840 (84%)	L	L
TL Defl inch	0.574 (L/301)	7'5 1/4"	0.719 (L/240)	0.800 (80%)	D+L	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

- 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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- 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	0-2-15		Top	59 lb	124 lb	0 lb	0 lb	J7
2	Point	1-2-15		Top	297 lb	691 lb	0 lb	0 lb	J9 J7
3	Point	2-2-15		Top	120 lb	253 lb	0 lb	0 lb	J7
4	Point	2-6-15		Top	170 lb	423 lb	0 lb	0 lb	J7
5	Point	3-2-15		Top	121 lb	253 lb	0 lb	0 lb	J7



Continued on page 2...

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

This design is valid until 4/24/2023

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	2021-02-04
Sewage System			
Zoning			

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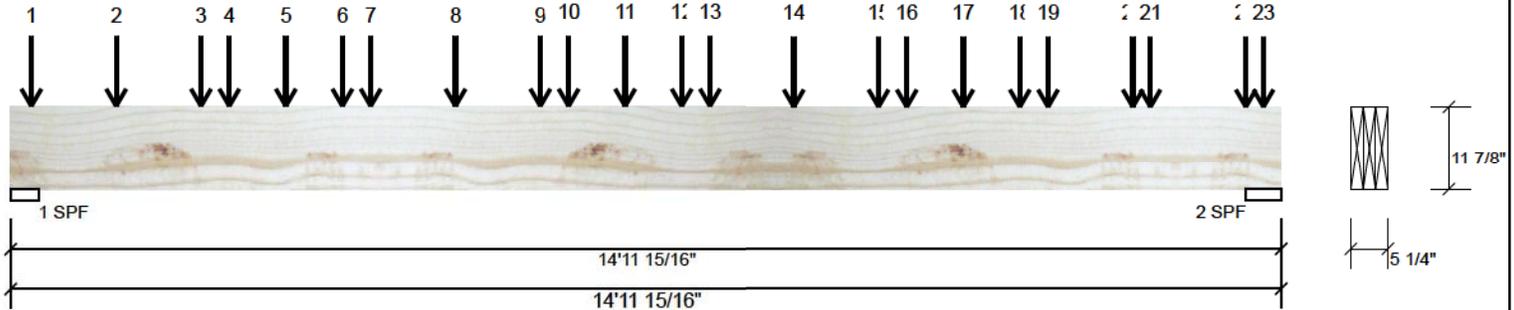




Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2
 Project #:

B5-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
6	Point	3-10-15		Top	170 lb	423 lb	0 lb	0 lb	J9
7	Point	4-2-15		Top	120 lb	253 lb	0 lb	0 lb	J7
8	Point	5-2-15		Top	297 lb	691 lb	0 lb	0 lb	J9 J7
9	Point	6-2-15		Top	109 lb	253 lb	0 lb	0 lb	J7
10	Point	6-6-15		Top	160 lb	423 lb	0 lb	0 lb	J9
11	Point	7-2-15		Top	100 lb	253 lb	0 lb	0 lb	J7
12	Point	7-10-15		Top	159 lb	423 lb	0 lb	0 lb	J9
13	Point	8-2-15		Top	100 lb	253 lb	0 lb	0 lb	J7
14	Point	9-2-15		Top	264 lb	691 lb	0 lb	0 lb	J9 J7
15	Point	10-2-15		Top	100 lb	253 lb	0 lb	0 lb	J7
16	Point	10-6-15		Top	159 lb	423 lb	0 lb	0 lb	J9
17	Point	11-2-15		Top	100 lb	253 lb	0 lb	0 lb	J7
18	Point	11-10-15		Top	159 lb	423 lb	0 lb	0 lb	J9
19	Point	12-2-15		Top	110 lb	278 lb	0 lb	0 lb	J7
20	Point	13-2-15		Top	159 lb	425 lb	0 lb	0 lb	J9
21	Point	13-5-7		Top	121 lb	318 lb	0 lb	0 lb	J7
22	Point	14-6-15		Top	78 lb	209 lb	0 lb	0 lb	J9
23	Point	14-9-7		Top	61 lb	163 lb	0 lb	0 lb	J7
	Self Weight					14 PLF			

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Notes
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Lumber
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 2. LVL not to be treated with fire retardant or corrosive 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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 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 4/24/2023

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

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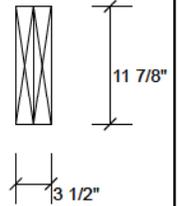
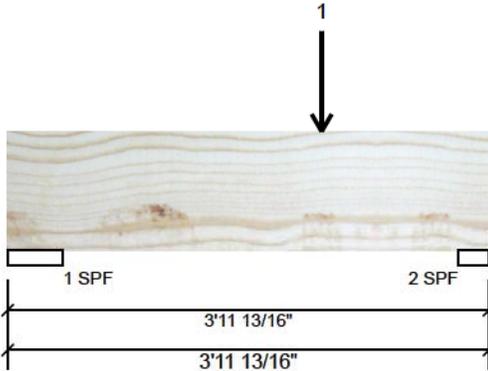


Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2
 Project #:

B7-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	906	380	0	0
2	1672	683	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.500"	15% 476 / 1359	1835 L	1.25D+1.5L
2 - SPF	3.063"	51% 854 / 2508	3362 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3998 ft-lb	2'7 3/16"	34261 ft-lb	0.117 (12%)	1.25D+1.5L	L
Unbraced	3998 ft-lb	2'7 3/16"	34261 ft-lb	0.117 (12%)	1.25D+1.5L	L
Shear	3348 lb	2'9 5/8"	11596 lb	0.289 (29%)	1.25D+1.5L	L
Perm Defl in. (L/11689)	0.003	2'7 3/16"	0.113 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch (L/4734)	0.009	2'7 3/16"	0.113 (L/360)	0.080 (8%)	L	L
TL Defl inch (L/3370)	0.012	2'7 3/16"	0.170 (L/240)	0.070 (7%)	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.
- 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	Point	2-7-3		Top	1026 lb	2578 lb	0 lb	0 lb	F7
	Self Weight				10 PLF				



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

This design is valid until 4/24/2023

Notes

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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
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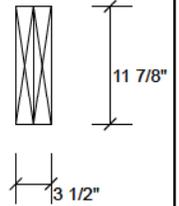
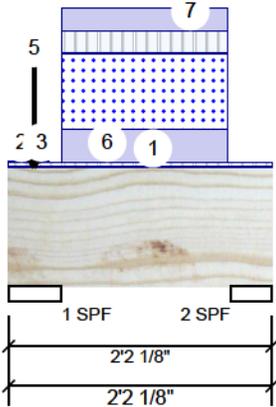


Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2
 Project #:

F6-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 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	74	190	189	0
2	71	149	184	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.250"	5% 238 / 357	595 L	1.25D+1.5S +L
2 - SPF	4.125"	6% 187 / 347	533 L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	220 ft-lb	1'1 5/8"	34261 ft-lb	0.006 (1%)	1.25D+1.5S +L	L
Unbraced	220 ft-lb	1'1 5/8"	34261 ft-lb	0.006 (1%)	1.25D+1.5S +L	L
Shear	177 lb	1'4 3/8"	11596 lb	0.015 (2%)	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/62384)	1'1 5/8"	0.051 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.000 (L/37484)	1'1 5/8"	0.076 (L/240)	0.010 (1%)	D+S+0.5L	L

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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.
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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

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Notes

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Lumber

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Handling & Installation

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6. For flat roofs provide proper drainage to prevent ponding

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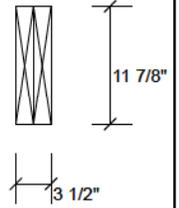
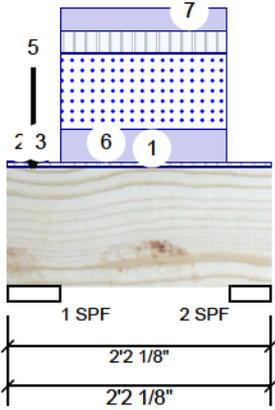


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 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
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 Job Name: BRENTWOOD- 2 EL-1-2
 Project #:

F6-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-2-2	0-4-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-4-1		Top	1 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 0-4-0		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Point	0-2-8		Top	2 lb	0 lb	0 lb	0 lb	Wall Self Weight
5	Point	0-2-8		Top	33 lb	0 lb	0 lb	0 lb	Wall Self Weight
6	Part. Uniform	0-5-4 to 1-9-12		Top	117 PLF	82 PLF	271 PLF	0 PLF	
7	Part. Uniform	0-5-4 to 1-9-12		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				10 PLF				

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Zoning			

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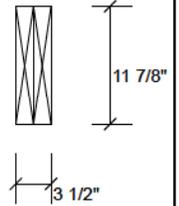
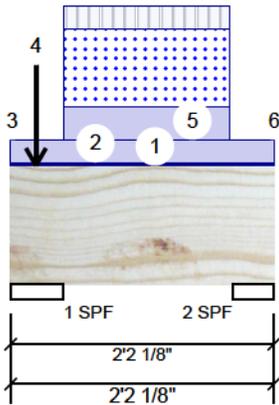


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Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2
 Project #:

F6-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	141	308	440	0
2	64	176	184	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L	lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	10%	385 / 801	1186	L	1.25D+1.5S +L
2 - SPF	4.125"	6%	220 / 340	559	L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	218 ft-lb	1'1 5/8"	34261 ft-lb	0.006 (1%)	1.25D+1.5S +L	L
Unbraced	218 ft-lb	1'1 5/8"	34261 ft-lb	0.006 (1%)	1.25D+1.5S +L	L
Shear	174 lb	1'4 3/8"	11596 lb	0.015 (2%)	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/63061)	1'1 5/8"	0.051 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.000 (L/37856)	1'1 5/8"	0.076 (L/240)	0.010 (1%)	D+S+0.5L	L

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- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

This design is valid until 4/24/2023

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

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 613-838-2775 / 905-642-4400

CSD | DRAW DESIGN BUILD

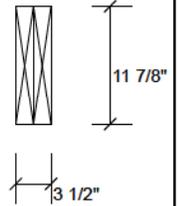
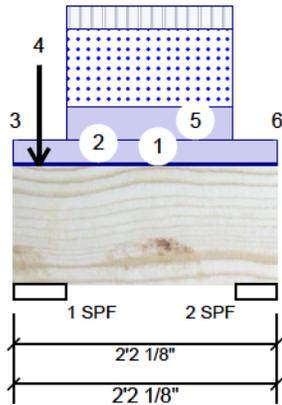


Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2
 Project #:

F6-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-2-2	0-2-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-2-2		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-0 to 0-0-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Point	0-2-8		Top	120 lb	75 lb	251 lb	0 lb	F 1 F1
5	Part. Uniform	0-5-4 to 1-9-12		Top	117 PLF	82 PLF	271 PLF	0 PLF	
6	Part. Uniform	2-2-2 to 2-2-2		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				10 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

This design is valid until 4/24/2023

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

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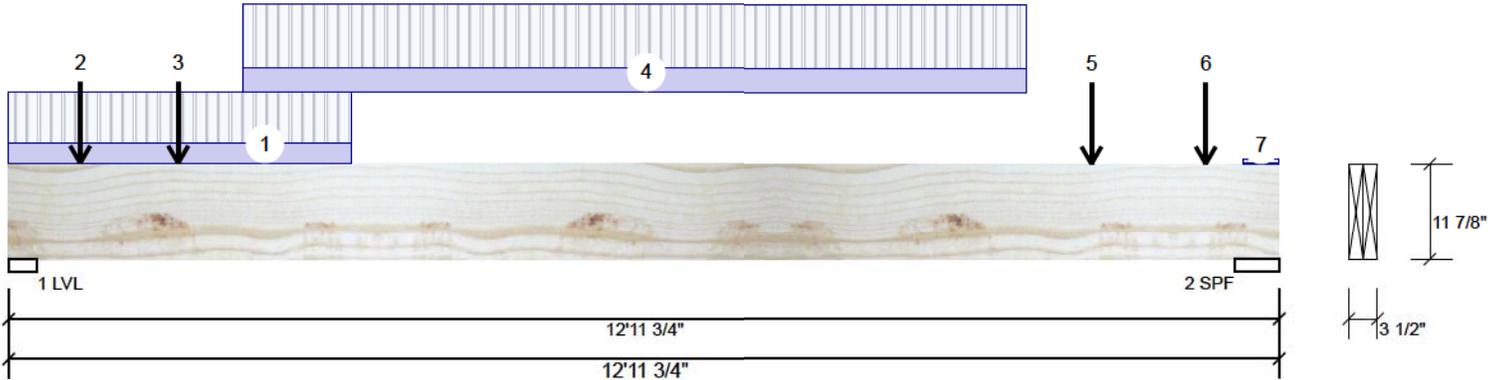




Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD- 2 EL-1-2
 Project #:

F7-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	2578	1026	0	0
2	1999	812	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - LVL	3.500"	57% 1283 / 3866	5149 L	1.25D+1.5L
2 - SPF	5.500"	34% 1015 / 2998	4013 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	12527 ft-lb	6' 11/16"	34261 ft-lb	0.366 (37%)	1.25D+1.5L	L
Unbraced	12527 ft-lb	6' 11/16"	27160 ft-lb	0.461 (46%)	1.25D+1.5L	L
Shear	4559 lb	1'2 5/8"	11596 lb	0.393 (39%)	1.25D+1.5L	L
Perm Defl in.	0.079 (L/1884)	6'3 11/16"	0.412 (L/360)	0.190 (19%)	D	Uniform
LL Defl inch	0.195 (L/759)	6'3 9/16"	0.412 (L/360)	0.470 (47%)	L	L
TL Defl inch	0.274 (L/541)	6'3 9/16"	0.618 (L/240)	0.440 (44%)	D+L	L

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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	0-0-0 to 3-6-0		Top	90 PLF	240 PLF	0 PLF	0 PLF	
2	Point	0-8-12		Near Face	120 lb	320 lb	0 lb	0 lb	J8
3	Point	1-8-12		Near Face	128 lb	343 lb	0 lb	0 lb	J8
4	Part. Uniform	2-4-12 to 10-4-12		Near Face	110 PLF	294 PLF	0 PLF	0 PLF	
5	Point	11-0-12		Near Face	138 lb	367 lb			
6	Point	12-2-12		Near Face	131 lb	348 lb			

Continued on page 2...



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Sewage System			
Zoning			

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Lumber

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Handling & Installation

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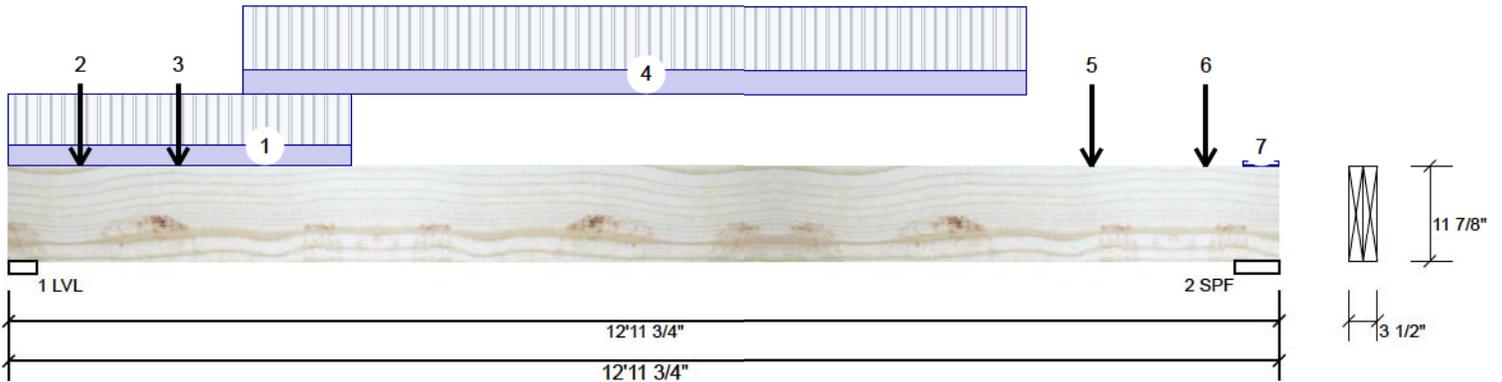




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 Address: TRINAR HALL, EAST GWILLIMBURY, ON

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F7-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Tie-In	12-7-6 to 12-11-12	0-5-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				

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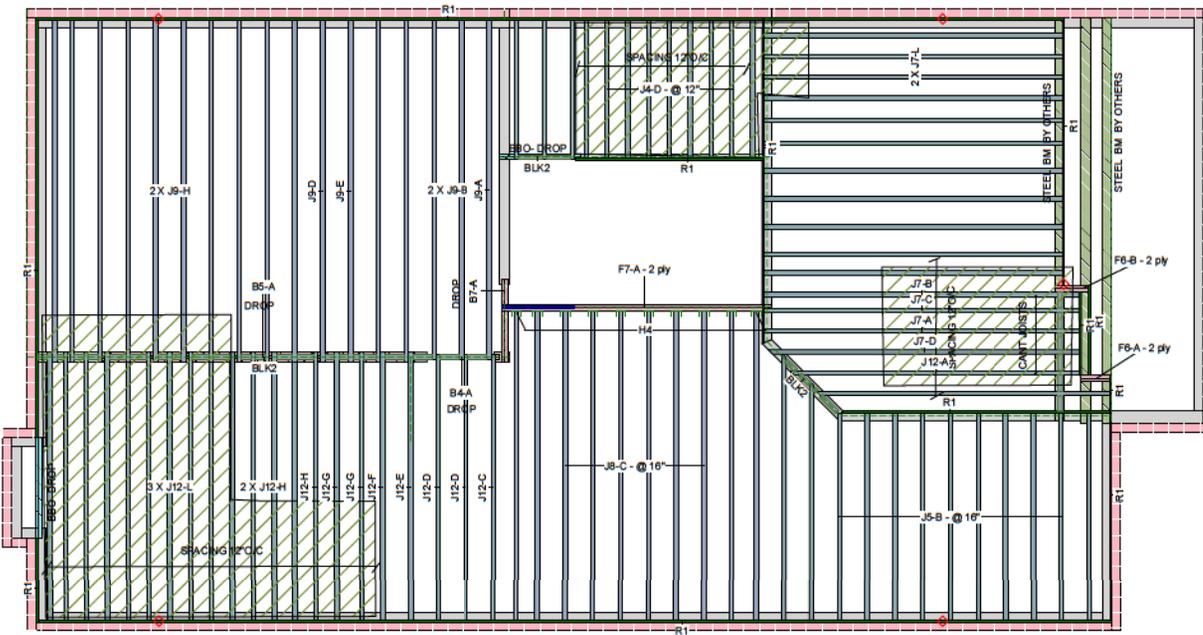
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CSD | DRAW DESIGN BUILD

Second Floor



Second Floor
LVL/L SL (Flush)

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

LVL/L SL (Dropped)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
B4	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	4-0-0
B5	Forex 2.0E-3000Fb LVL	1.75	11.875	1	3	3	16-0-0
B7	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	4-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
J7	AJS 140	2.5	11.875			16	16-0-0
J12	AJS 140	2.5	11.875			23	14-0-0
J6	AJS 140	2.5	11.875			1	12-0-0
J5	AJS 140	2.5	11.875			10	10-0-0
J4	AJS 140	2.5	11.875			12	8-0-0
J9	AJS 20	2.5	11.875			17	18-0-0
J8	AJS 20	2.5	11.875			10	16-0-0

Rim Board

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			17	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
BLK2	AJS 140	2.5	11.875			Varies	24-0-0

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	Supported Member
H4	10	LF2511			12 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" 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.

Legend

PS	Point Load Support
◇	Load from Above
Wall	Wall
Norbord Rimboard Plus 1.125 X 11.875	Norbord Rimboard Plus 1.125 X 11.875
AJS 140 11.875	AJS 140 11.875
AJS 20 11.875	AJS 20 11.875
Forex 2.0E-3000Fb LVL 1.75 X 9.5 (Dropped)	Forex 2.0E-3000Fb LVL 1.75 X 9.5 (Dropped)
Forex 2.0E-3000Fb LVL 1.75 X 11.875 (Dropped)	Forex 2.0E-3000Fb LVL 1.75 X 11.875 (Dropped)
Forex 2.0E-3000Fb LVL 1.75 X 11.875	Forex 2.0E-3000Fb LVL 1.75 X 11.875
1.5 X 9.5 (Dropped)	1.5 X 9.5 (Dropped)
1.75 X 9.5 (Dropped)	1.75 X 9.5 (Dropped)
5.25 X 10.25 (Dropped)	5.25 X 10.25 (Dropped)

JOISTS SPACING 12\"/>

JOB INFORMATION

Builder	BRENTWOOD 2 EL-3
Project	GREENPARK HOMES TRINAR HALL, EAST GWILLIMBURY, ON
Shipping	TRINAR HALL, EAST GWILLIMBURY, ON
Designer	SB
Plotted	December 17, 2020
Layout Name	BRENTWOOD 2 EL-3
Job Path	C:\Data\SAUML\GREENPARK HOMES\TRINAR HALL\BRENTWOOD 2\FLOOR\EL-3\WITH AJS\140\BRENTWOOD 2 EL-3.jal

DESIGN CRITERIA

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

Second Floor

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

CCMC References

Boise - 12472-R, 12787-R
L.P. - 12412-R
Forex - 14056-R

Kott Inc.

3228 Moodie Dr, Ottawa
14 Anderson Blvd, Uxbridge, Ontario
613-839-2775 /
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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	2021-02-04
Sewage System			
Zoning			



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

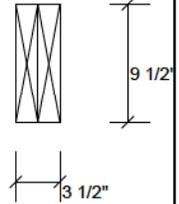
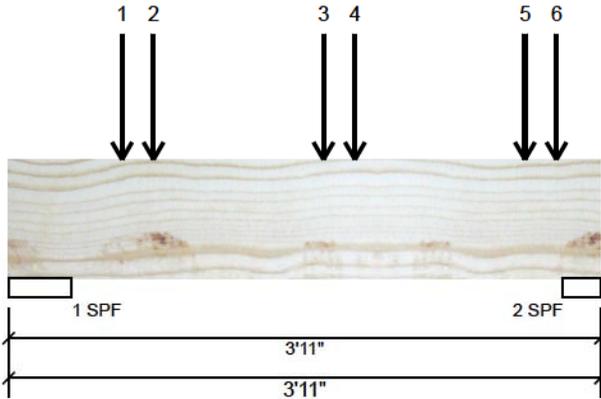


Client: GREENPARK HOMES
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 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD 2 EL- 3
 Project #:

B4-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	1034	402	0	0
2	1089	422	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.000"	19% 503 / 1551	2053 L	1.25D+1.5L
2 - SPF	3.000"	33% 527 / 1634	2161 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1681 ft-lb	2'1"	22724 ft-lb	0.074 (7%)	1.25D+1.5L	L
Unbraced	1681 ft-lb	2'1"	22724 ft-lb	0.074 (7%)	1.25D+1.5L	L
Shear	1470 lb	1'1 3/4"	9277 lb	0.158 (16%)	1.25D+1.5L	L
Perm Defl in. (L/16922)	0.002	2'1 1/16"	0.112 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch (L/6550)	0.006	2'1 1/16"	0.112 (L/360)	0.050 (5%)	L	L
TL Defl inch (L/4722)	0.009	2'1 1/16"	0.169 (L/240)	0.050 (5%)	D+L	L

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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	0-9-0		Top	159 lb	425 lb	0 lb	0 lb	J9
2	Point	0-11-8		Top	124 lb	332 lb	0 lb	0 lb	J12
3	Point	2-1-0		Top	159 lb	425 lb			
4	Point	2-3-8		Top	124 lb	332 lb			
5	Point	3-5-0		Top	113 lb	303 lb			



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Lumber

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

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
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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

This design is valid until 4/24/2023

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Zoning			

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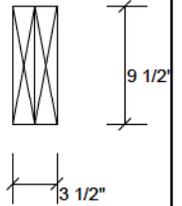
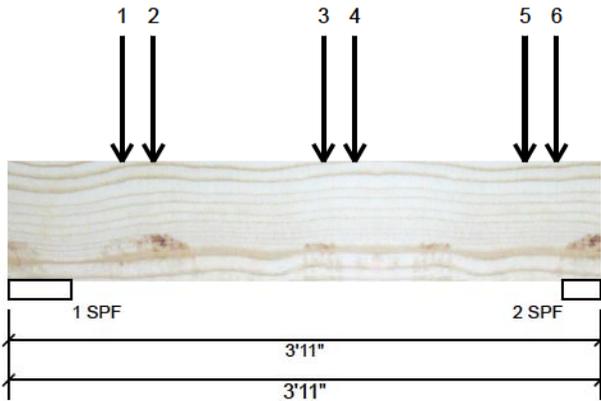


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B4-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point Self Weight	3-7-8		Top	115 lb 8 PLF	306 lb	0 lb	0 lb	J12

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



Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			



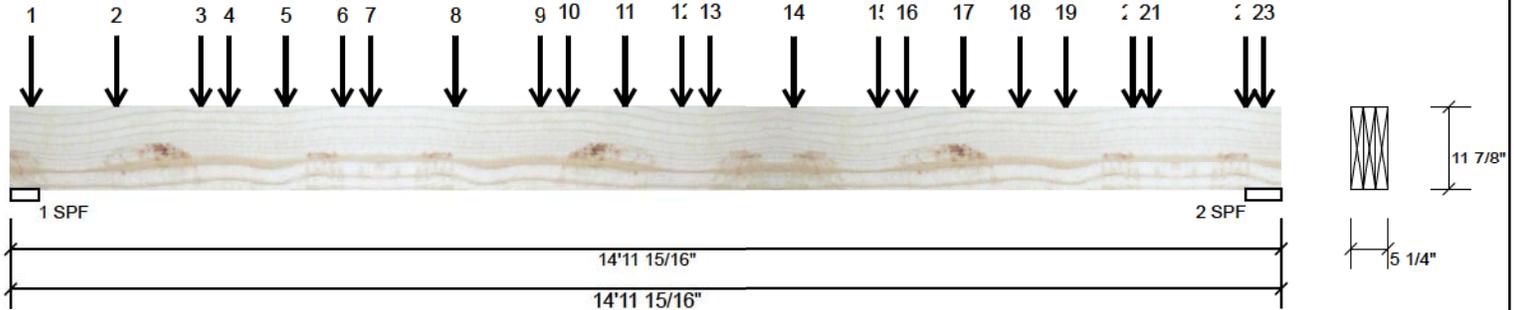


Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD 2 EL- 3
 Project #:

B5-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	4028	1788	0	0
2	4124	1719	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total Ld.	Case	Ld. Comb.
1 - SPF	3.938"	65%	2235 / 6043	8278	L	1.25D+1.5L
2 - SPF	5.000"	52%	2149 / 6185	8334	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	30009 ft-lb	7'2 15/16"	53447 ft-lb	0.561 (56%)	1.25D+1.5L	L
Unbraced	30009 ft-lb	7'2 15/16"	50243 ft-lb	0.597 (60%)	1.25D+1.5L	L
Shear	7978 lb	1'3 1/16"	17394 lb	0.459 (46%)	1.25D+1.5L	L
Perm Defl in.	0.172 (L/1005)	7'4 15/16"	0.479 (L/360)	0.360 (36%)	D	Uniform
LL Defl inch	0.402 (L/429)	7'5 3/8"	0.479 (L/360)	0.840 (84%)	L	L
TL Defl inch	0.574 (L/301)	7'5 1/4"	0.719 (L/240)	0.800 (80%)	D+L	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

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
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- 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	0-2-15		Top	59 lb	124 lb	0 lb	0 lb	J12
2	Point	1-2-15		Top	297 lb	691 lb	0 lb	0 lb	J12 J9
3	Point	2-2-15		Top	120 lb	253 lb	0 lb	0 lb	J12
4	Point	2-6-15		Top	170 lb	423 lb	0 lb	0 lb	J12
5	Point	3-2-15		Top	121 lb	253 lb	0 lb	0 lb	J12

Continued on page 2...



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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

This design is valid until 4/24/2023

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

Kott Inc.
 3228 Moodie Dr, Ottawa, Ontario
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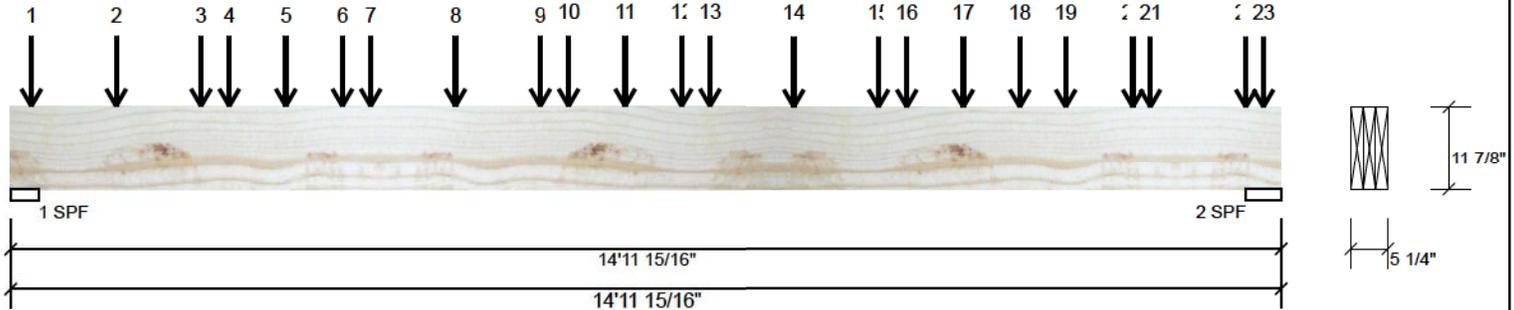


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 Address: GREENPARK HOMES
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B5-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	3-10-15		Top	170 lb	423 lb	0 lb	0 lb	J9
7	Point	4-2-15		Top	120 lb	253 lb	0 lb	0 lb	J12
8	Point	5-2-15		Top	297 lb	691 lb	0 lb	0 lb	J12 J9
9	Point	6-2-15		Top	109 lb	253 lb	0 lb	0 lb	J12
10	Point	6-6-15		Top	160 lb	423 lb	0 lb	0 lb	J9
11	Point	7-2-15		Top	100 lb	253 lb	0 lb	0 lb	J12
12	Point	7-10-15		Top	159 lb	423 lb	0 lb	0 lb	J9
13	Point	8-2-15		Top	100 lb	253 lb	0 lb	0 lb	J12
14	Point	9-2-15		Top	264 lb	691 lb	0 lb	0 lb	J9 J12
15	Point	10-2-15		Top	100 lb	253 lb	0 lb	0 lb	J12
16	Point	10-6-15		Top	159 lb	423 lb	0 lb	0 lb	J9
17	Point	11-2-15		Top	110 lb	278 lb	0 lb	0 lb	J12
18	Point	11-10-15		Top	159 lb	425 lb	0 lb	0 lb	J9
19	Point	12-5-7		Top	110 lb	278 lb	0 lb	0 lb	J12
20	Point	13-2-15		Top	159 lb	423 lb	0 lb	0 lb	J9
21	Point	13-5-7		Top	111 lb	293 lb	0 lb	0 lb	J12
22	Point	14-6-15		Top	78 lb	209 lb	0 lb	0 lb	J9
23	Point	14-9-7		Top	61 lb	163 lb	0 lb	0 lb	J12
Self Weight					14 PLF				

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Lumber

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

chemicals

Handling & Installation

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6. For flat roofs provide proper drainage to prevent ponding

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Discipline	Reviewer	BCIN	Date
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Sewage System			
Zoning			



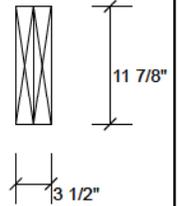
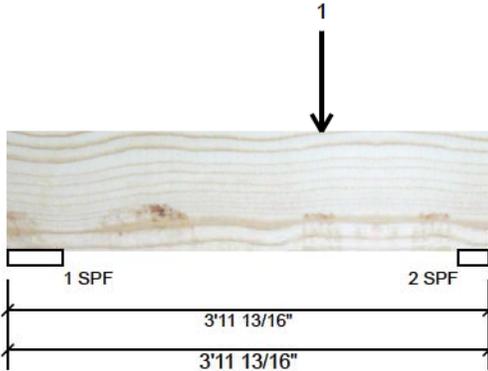


Client: GREENPARK HOMES
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 Address: GREENPARK HOMES TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD 2 EL- 3
 Project #:

B7-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	906	380	0	0
2	1672	683	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.500"	15% 476 / 1359	1835 L	1.25D+1.5L
2 - SPF	3.063"	51% 854 / 2508	3362 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3998 ft-lb	2'7 3/16"	34261 ft-lb	0.117 (12%)	1.25D+1.5L	L
Unbraced	3998 ft-lb	2'7 3/16"	34261 ft-lb	0.117 (12%)	1.25D+1.5L	L
Shear	3348 lb	2'9 5/8"	11596 lb	0.289 (29%)	1.25D+1.5L	L
Perm Defl in. (L/11689)	0.003	2'7 3/16"	0.113 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch (L/4734)	0.009	2'7 3/16"	0.113 (L/360)	0.080 (8%)	L	L
TL Defl inch (L/3370)	0.012	2'7 3/16"	0.170 (L/240)	0.070 (7%)	D+L	L

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Design Notes

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- 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	Point	2-7-3		Top	1026 lb	2578 lb	0 lb	0 lb	F7
	Self Weight				10 PLF				



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			

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Notes

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Lumber

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

chemicals

Handling & Installation

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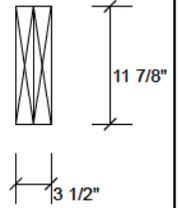
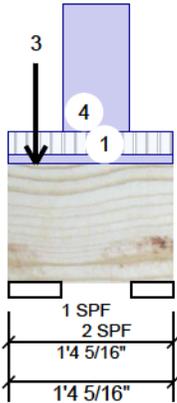


Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD 2 EL- 3
 Project #:

F6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	
Floor Live:	40 PSF
Dead:	15 PSF

Application:	Floor (Residential)
Design Method:	LSD
Building Code:	NBCC 2015 / OBC 2012
Load Sharing:	No
Deck:	Not Checked
Vibration:	Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	11	61	0	0
2	9	31	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.202"	1%	76 / 16	92 L	1.25D+1.5L
2 - SPF	4.125"	1%	39 / 14	53 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	9 ft-lb	8 11/16"	22955 ft-lb	0.000 (0%)	1.25D+1.5L	L
Unbraced	9 ft-lb	8 11/16"	22955 ft-lb	0.000 (0%)	1.25D+1.5L	L
Shear	45 lb	1'4 5/16"	7769 lb	0.006 (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%)		

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Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
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- 7 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 1-4-5	0-4-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-2-11		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
3	Point	0-2-11		Top	22 lb	0 lb	0 lb	0 lb	Wall Self Weight
4	Part. Uniform Self Weight	0-5-7 to 0-11-15		Top	80 PLF	0 PLF			Wall Self Weight



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Lumber
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Discipline	Reviewer	BCIN	Date
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Sewage System			
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CSD | DRAW DESIGN BUILD

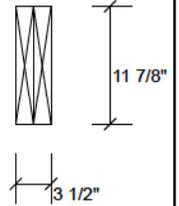
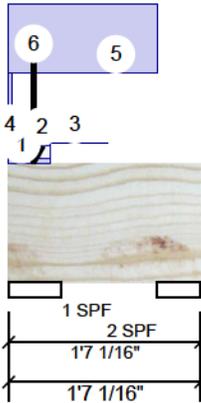


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Member Information

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	123	261	396	0
2	0	39	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L	lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	11%	327 / 717	1044	L	1.25D+1.5S +L
2 - SPF	4.375"	1%	55 / 0	55	Uniform	1.4D

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	13 ft-lb	9 15/16"	22269 ft-lb	0.001 (0%)	1.4D	Uniform
Unbraced	13 ft-lb	9 15/16"	22269 ft-lb	0.001 (0%)	1.4D	Uniform
Shear	58 lb	3 9/16"	7537 lb	0.008 (1%)	1.4D	Uniform
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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- 7 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 0-4-2	0-4-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-4-2		Top	2 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 0-9-13		Top	1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 0-0-4		Top	80 PLF	0 PLF			Weight
5	Part. Uniform	0-0-0 to 1-2-12		Top	80 PLF	0 PLF			Weight

Continued on page 2...

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Lumber

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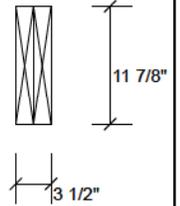
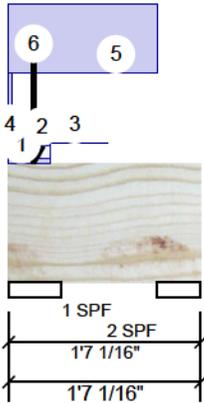


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Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	0-2-8		Top	182 lb	118 lb	396 lb	0 lb	F1 F1
	Self Weight				10 PLF				

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6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 4/24/2023

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



Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-04
Sewage System			
Zoning			



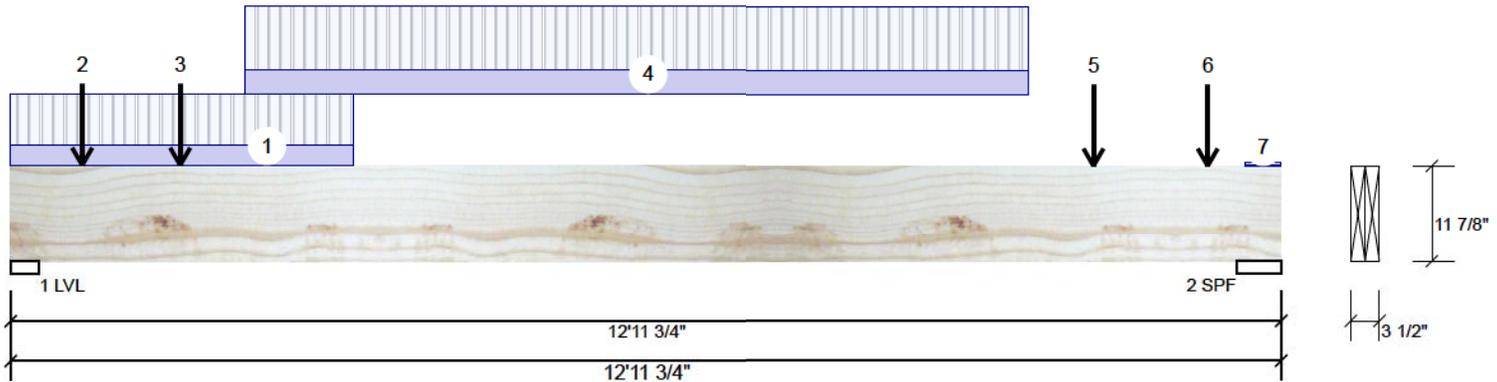


Client: GREENPARK HOMES
 Project: TRINAR HALL, EAST GWILLIMBURY, ON
 Address: GREENPARK HOMES
 TRINAR HALL, EAST GWILLIMBURY, ON

Date: 12/17/2020
 Input by: S B
 Job Name: BRENTWOOD 2 EL- 3
 Project #:

F7-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	2578	1026	0	0
2	1997	811	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total Ld. Case	Ld. Comb.
1 - LVL	3.500"	57%	1283 / 3866	5149 L	1.25D+1.5L
2 - SPF	5.500"	34%	1014 / 2995	4009 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	12527 ft-lb	6' 11/16"	34261 ft-lb	0.366 (37%)	1.25D+1.5L	L
Unbraced	12527 ft-lb	6' 11/16"	27160 ft-lb	0.461 (46%)	1.25D+1.5L	L
Shear	4559 lb	1'2 5/8"	11596 lb	0.393 (39%)	1.25D+1.5L	L
Perm Defl in.	0.079 (L/1884)	6'3 11/16"	0.412 (L/360)	0.190 (19%)	D	Uniform
LL Defl inch	0.195 (L/759)	6'3 9/16"	0.412 (L/360)	0.470 (47%)	L	L
TL Defl inch	0.274 (L/541)	6'3 9/16"	0.618 (L/240)	0.440 (44%)	D+L	L

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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	0-0-0 to 3-6-0		Top	90 PLF	240 PLF	0 PLF	0 PLF	
2	Point	0-8-12		Near Face	120 lb	320 lb	0 lb	0 lb	J8
3	Point	1-8-12		Near Face	128 lb	343 lb	0 lb	0 lb	J8
4	Part. Uniform	2-4-12 to 10-4-12		Near Face	110 PLF	294 PLF	0 PLF	0 PLF	
5	Point	11-0-12		Near Face	138 lb	367 lb			
6	Point	12-2-12		Near Face	131 lb	348 lb			

Continued on page 2...



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Sewage System			
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CSD | DRAW DESIGN BUILD

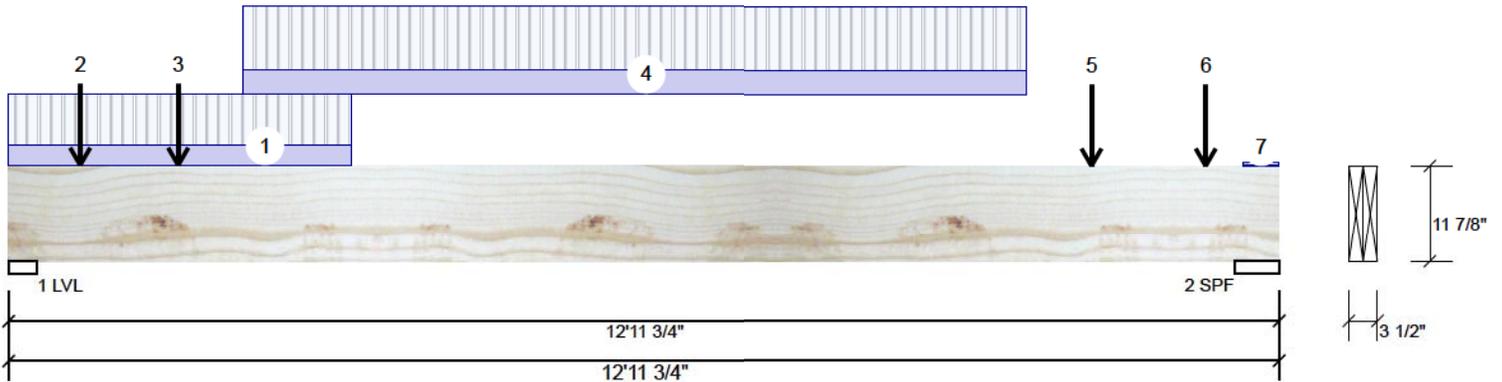


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...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Tie-In	12-7-6 to 12-11-12	0-3-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				

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