

GREENPARK-TRINAL HALL-
BRENTWOOD 1 EL3

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 buildi t a written pre-authorization.



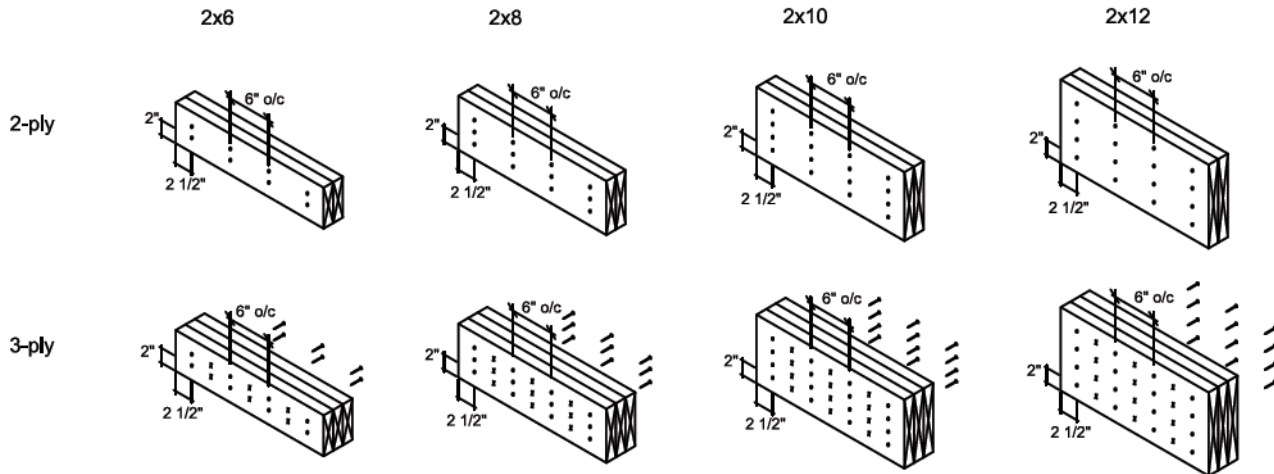
Town of
East Gwillimbury
Building Standards Branch BCIN #15487

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

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

GREENPARK-TRINAL HALL-
BRENTWOOD 1 EL3

Conventional Connections



Conventional connection notes:

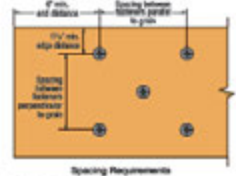
- Nails to be 3" long wire nails.
- Nails to be located 2" min. from the top and bottom of the member. Start all nails 2 1/2" min. from ends.
- Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

SIMPSON SDW SPACING REQUIREMENT

Table 9 – Spacing Requirements

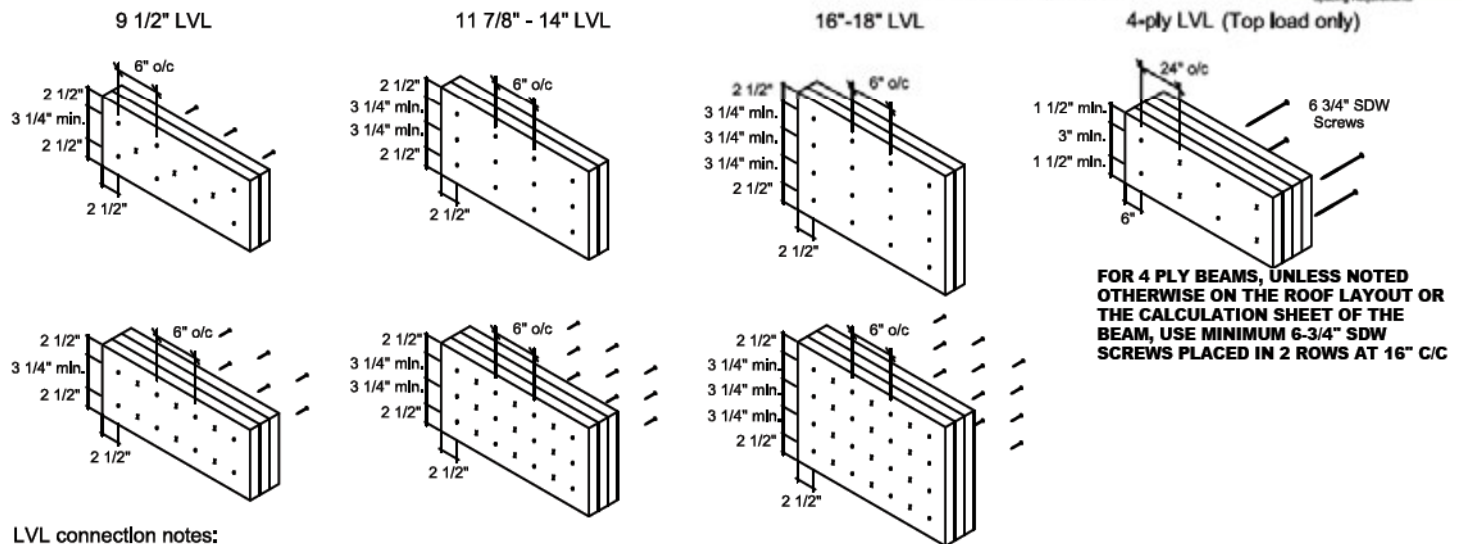
Geometry	Minimum Spacing (in.)	
	S-J-L	S-B-F
Spacing parallel to grain	6	5
End distance parallel to grain	6	6
Spacing perpendicular to grain	5	7 1/2
End distance perpendicular to grain	7 1/2	7 1/2

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.

Multiple Member Connections

All connections are for uniformly distributed loads.

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



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

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

F10-A

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 14:30:42

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Address:

TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

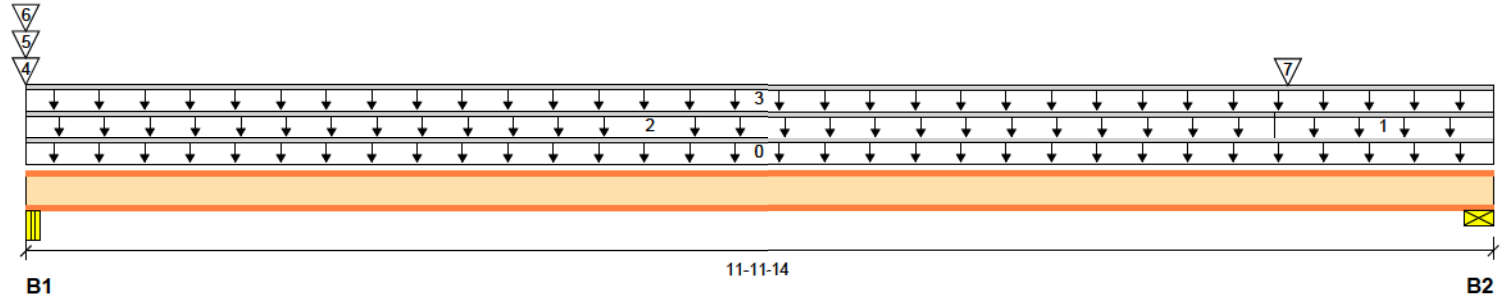
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-5/8"	258 / 0	118 / 0		
B2, 2-3/8"	548 / 0	222 / 0		

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

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

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	11-11-14	Top	2				00-00-00
1		Unf. Lin. (lb/ft)	L	10-02-08	11-11-14	Top	64	24			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	10-02-08	Top	7	3			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	11-11-14	Top	20	7			n/a
4	J1	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	21	8			n/a
5	J8	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	26	10			n/a
6	Wall Self Weight	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	7				n/a
7	F8	Conc. Pt. (lbs)	L	10-03-12	10-03-12	Back	338	130			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1629 ft-lbs	4095 ft-lbs	39.8%	1	07-10-14
End Reaction	1099 lbs	1653 lbs	66.5%	1	11-11-14
End Shear	1066 lbs	1830 lbs	58.3%	1	11-09-08
Total Load Deflection	L/797 (0.176")	n/a	30.1%	4	06-05-11
Live Load Deflection	L/999 (0.124")	n/a	n/a	5	06-05-11
Max Defl.	0.176"	n/a	17.6%	4	06-05-11
Span / Depth	14.8				



Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Beam 2-5/8" x 2-1/2"	535 lbs	13.2%	31.5%	Spruce-Pine-Fir
B2	Wall/Plate 2-3/8" x 2-1/2"	1099 lbs	30.1%	66.5%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O8
BC CALC® analysis is based on Canadian Limit States Design, as per NBC
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9



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READ ALL ENGINEER NOTE PAGE CALCULATIONS CONTAINS USED IN THE DESIGN OF THIS COMPONENT.

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

F10-B

Dry | 1 span | No cant.

December 16, 2020 14:30:42

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Description: Level - Ground Floor

City, Province, Postal Code:

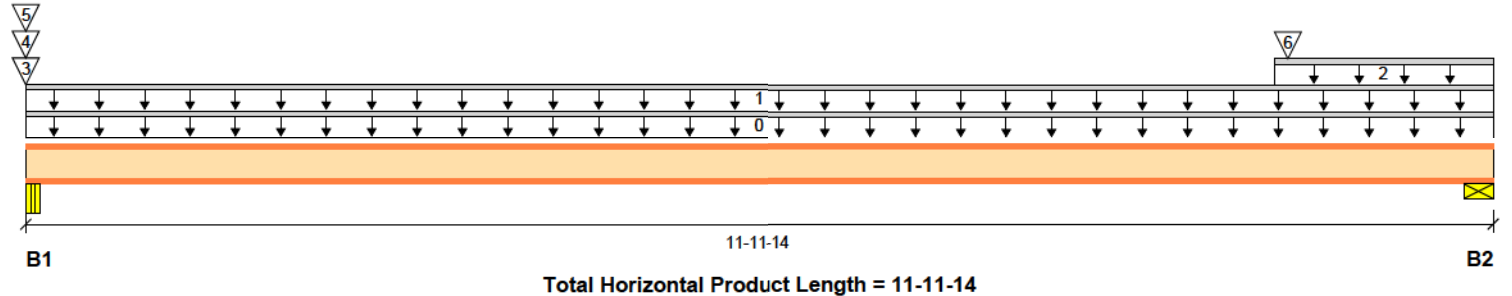
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-5/8"	344 / 0	165 / 0		
B2, 2-3/8"	552 / 0	223 / 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	11-11-14	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	11-11-14	Top	23	9			n/a
2		Unf. Lin. (lb/ft)	L	10-02-08	11-11-14	Top	64	24			n/a
3	J1	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	68	25			n/a
4	J8	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	85	32			n/a
5	Wall Self Weight	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top		23			n/a
6	F8	Conc. Pt. (lbs)	L	10-03-12	10-03-12	Front	355	137			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1563 ft-lbs	4095 ft-lbs	38.2%	1	08-02-06
End Reaction	1107 lbs	1653 lbs	66.9%	1	11-11-14
End Shear	1072 lbs	1830 lbs	58.6%	1	11-09-08
Total Load Deflection	L/841 (0.167")	n/a	28.5%	4	06-05-11
Live Load Deflection	L/999 (0.117")	n/a	n/a	5	06-05-11
Max Defl.	0.167"	n/a	16.7%	4	06-05-11
Span / Depth	14.8				



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Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Beam 2-5/8" x 2-1/2"	723 lbs	17.9%	42.6%	Spruce-Pine-Fir
B2	Wall/Plate 2-3/8" x 2-1/2"	1107 lbs	30.3%	66.9%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O8
BC CALC® analysis is based on Canadian Limit States Design, as per NBC
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9



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

READ ALL NOTES ON ENGINEERING NOTE PAGE IS AN INT CALCULATION SUMM CONTAINS SPECIFIC USED IN THE DESIGN OF THIS COMPONENT.

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

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

F10-C

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 14:30:42

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

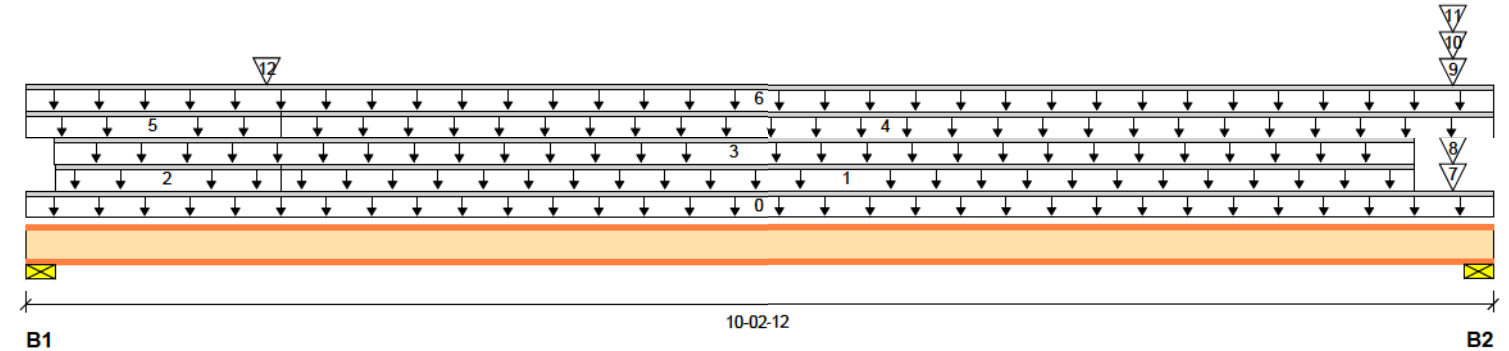
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Total Horizontal Product Length = 10-02-12

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	470 / 0	244 / 0		
B2, 6-7/8"	348 / 0	228 / 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	10-02-12	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	01-09-06	09-08-02	Top		1			n/a
2		Unf. Lin. (lb/ft)	L	00-02-07	01-09-06	Top		8			n/a
3		Unf. Lin. (lb/ft)	L	00-02-07	09-08-02	Top		3			n/a
4		Unf. Lin. (lb/ft)	L	01-09-06	10-02-12	Top	9	4			n/a
5		Unf. Lin. (lb/ft)	L	00-00-00	01-09-06	Top	64	24			n/a
6		Unf. Lin. (lb/ft)	L	00-00-00	10-02-12	Top	21	8			n/a
7		Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	13	5			n/a
8		Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	1				n/a
9	J6	Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	92	35			n/a
10	J6	Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	31	12			n/a
11	Wall Self Weight	Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top		60			n/a
12	F8	Conc. Pt. (lbs)	L	01-08-02	01-08-02	Back	277	137			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1390 ft-lbs	4095 ft-lbs	34.0%	1	03-02-10
End Reaction	1010 lbs	1653 lbs	61.1%	1	00-00-00
End Shear	976 lbs	1830 lbs	53.3%	1	00-02-06
Total Load Deflection	L/999 (0.106")	n/a	n/a	4	04-06-09
Live Load Deflection	L/999 (0.069")	n/a	n/a	5	04-06-09
Max Defl.	0.106"	n/a	n/a	4	04-06-09
Span / Depth	12.1				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Dema Resis Memt
B1	Wall/Plate 2-3/8" x 2-1/2"	1010 lbs	27.6%	61.1%
B2	Wall/Plate 6-7/8" x 2-1/2"	808 lbs	7.6%	43.7%



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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.

READ ALL NOTES ON ENGINEERING NOTE PAGE IS AN INT CALCULATION SUMM CONTAINS SPECIFIC USED IN THE DESIGN OF THIS COMPONENT.

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

F10-C

Dry | 1 span | No cant.

December 16, 2020 14:30:42

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

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

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

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

Calculations assume member is fully braced.

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

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

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

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



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Building Code	H. Authier	43236	2021-02-24
Severage Systems			
Zoning			

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F10-D

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 14:30:42

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

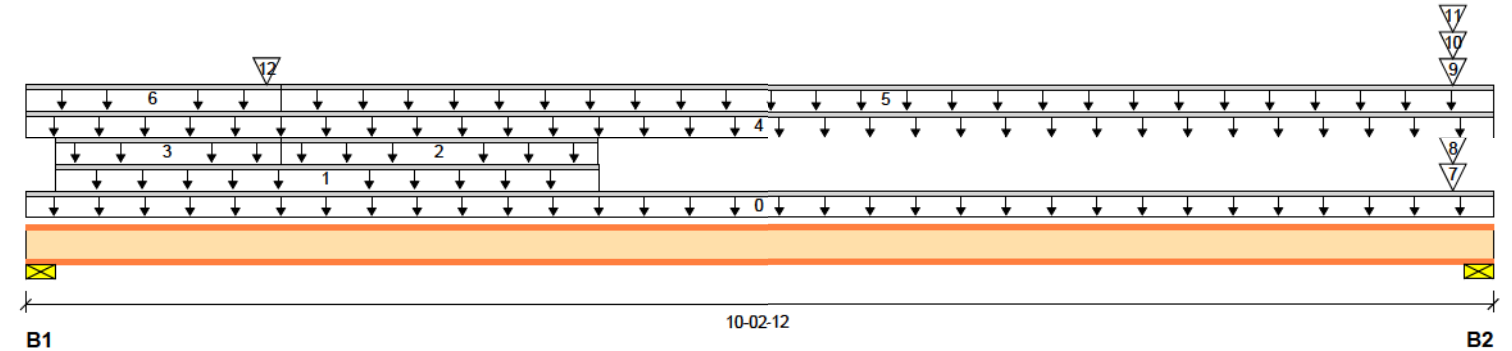
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	482 / 0	238 / 0		
B2, 6-7/8"	614 / 0	358 / 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	10-02-12	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	00-02-07	03-11-14	Top		3			n/a
2		Unf. Lin. (lb/ft)	L	01-09-06	03-11-13	Top		4			n/a
3		Unf. Lin. (lb/ft)	L	00-02-07	01-09-06	Top		8			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	10-02-12	Top	25	9			n/a
5		Unf. Lin. (lb/ft)	L	01-09-06	10-02-12	Top	28	11			n/a
6		Unf. Lin. (lb/ft)	L	00-00-00	01-09-06	Top	64	24			n/a
7		Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	24	9			n/a
8		Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	1				n/a
9		Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	1				n/a
10	J6	Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	269	101			n/a
11	Wall Self Weight	Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top		107			n/a
12	F8	Conc. Pt. (lbs)	L	01-08-02	01-08-02	Front	191	95			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1665 ft-lbs	4095 ft-lbs	40.7%	1	04-01-11
End Reaction	1368 lbs	1850 lbs	73.9%	1	10-02-12
End Shear	986 lbs	1830 lbs	53.9%	1	00-02-06
Total Load Deflection	L/889 (0.129")	n/a	27.0%	4	04-08-01
Live Load Deflection	L/999 (0.088")	n/a	n/a	5	04-08-01
Max Defl.	0.129"	n/a	12.9%	4	04-08-01
Span / Depth	12.1				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance	Dema Resis Memt
B1	Wall/Plate 2-3/8" x 2-1/2"	1021 lbs	28.0%	61.8%
B2	Wall/Plate 6-7/8" x 2-1/2"	1368 lbs	12.9%	73.9%



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

F10-D

Dry | 1 span | No cant.

December 16, 2020 14:30:42

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

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Calculations assume member is fully braced.

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Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

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



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Severage Systems			
Zoning			

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

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

READ ALL NOTES ON ENGINEERING NOTE PAGE IS AN INT CALCULATION SUMM CONTAINS SPECIFICA USED IN THE DESIGN OF THIS COMPONENT.

F7-A

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 14:30:42

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

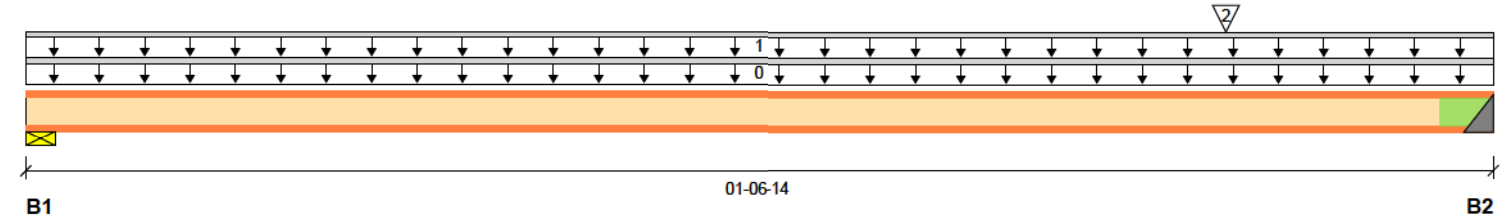
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	77 / 0	33 / 0		
B2, 2"	208 / 0	97 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-06-14	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	01-06-14	Top	64	24			n/a
2	J6	Conc. Pt. (lbs)	L	01-03-07	01-03-07	Front	184	89			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	75 ft-lbs	4095 ft-lbs	1.8%	1	01-02-09
End Reaction	434 lbs	2050 lbs	21.2%	1	01-06-14
End Shear	412 lbs	1830 lbs	22.5%	1	01-04-14
Total Load Deflection	L/999 (0.001")	n/a	n/a	4	01-01-11
Live Load Deflection	L/999 (0.001")	n/a	n/a	5	01-01-07
Max Defl.	0.001"	n/a	n/a	4	01-01-11
Span / Depth	1.7				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	156 lbs	4.3%	9.5%	Spruce-Pine-Fir
B2	Hanger 2" x 2-1/2"	434 lbs	22.3%	21.2%	LF259



Cautions

Web stiffeners required at bearing B2.
Hanger LF259 requires (10) 10dx1.5 face nails, (2) 10dx1.5 joist nails.
Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
Resistance Factor phi has been applied to all presented results per CSA O8
BC CALC® analysis is based on Canadian Limit States Design, as per NBC
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9



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

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

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

READ ALL NOTES ON ENGINEERING NOTE PAGE IS AN INT CALCULATION SUMM CONTAINS SPECIFIC USED IN THE DESIGN OF THIS COMPONENT.

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

F7-B

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 14:30:42

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

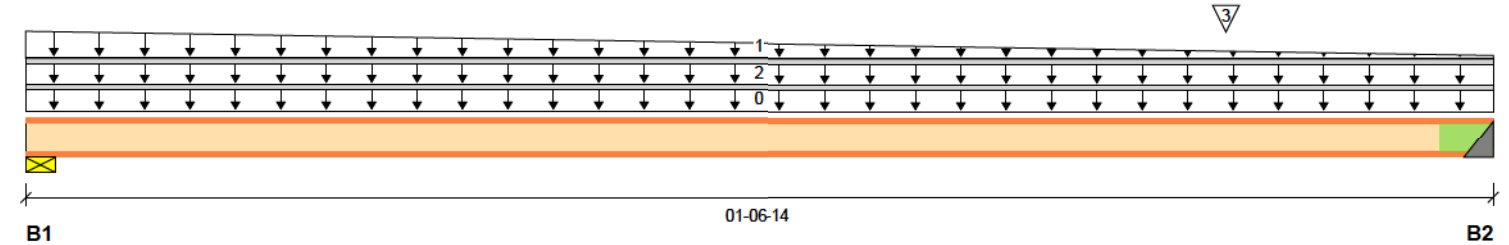
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Total Horizontal Product Length = 01-06-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	63 / 0	25 / 0		
B2, 2"	67 / 0	26 / 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	01-06-14	Top		2			00-00-00
1		Trapezoidal (lb/ft)	L	00-00-00	01-06-14	Top	17	6			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	01-06-14	Top	64	24			n/a
3	J2	Conc. Pt. (lbs)	L	01-03-07	01-03-07	Back	14	5			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	35 ft-lbs	4095 ft-lbs	0.9%	1	00-09-12
End Reaction	127 lbs	1653 lbs	7.7%	1	00-00-00
End Shear	111 lbs	1830 lbs	6.0%	1	01-04-14
Total Load Deflection	L/999 (0")	n/a	n/a	4	00-09-12
Live Load Deflection	L/999 (0")	n/a	n/a	5	00-09-12
Max Defl.	0"	n/a	n/a	4	00-09-12
Span / Depth	1.7				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	127 lbs	3.5%	7.7%	Spruce-Pine-Fir
B2	Hanger 2" x 2-1/2"	133 lbs	6.8%	6.5%	LF259

Cautions

Web stiffeners required at bearing B2.
Hanger LF259 requires (10) 10dx1.5 face nails, (2) 10dx1.5 joist nails.
Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist



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

F7-B

Dry | 1 span | No cant.

December 16, 2020 14:30:42

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

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

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

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

Calculations assume member is fully braced.

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

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

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F8-A

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 14:30:42

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

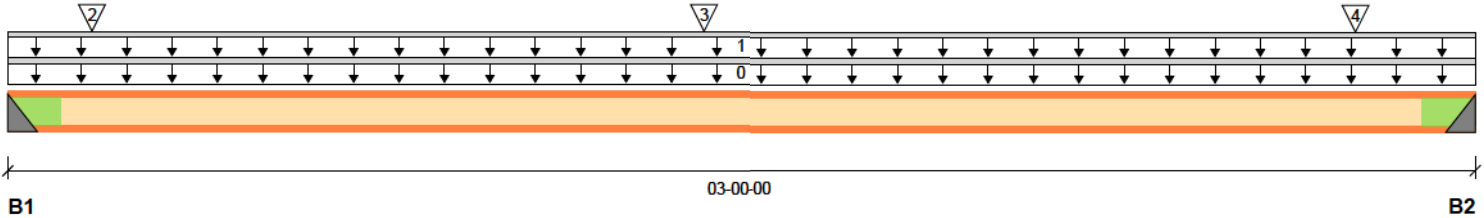
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	355 / 0	137 / 0		
B2, 2"	338 / 0	130 / 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	03-00-00	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	03-00-00	Top	34	13			n/a
2	J6	Conc. Pt. (lbs)	L	00-02-01	00-02-01	Front	156	59			n/a
3	J6	Conc. Pt. (lbs)	L	01-05-01	01-05-01	Front	262	98			n/a
4	J6	Conc. Pt. (lbs)	L	02-09-01	02-09-01	Front	171	64			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	449 ft-lbs	4095 ft-lbs	11.0%	1	01-05-01
End Reaction	703 lbs	2050 lbs	34.3%	1	00-00-00
End Shear	657 lbs	1830 lbs	35.9%	1	02-10-00
Total Load Deflection	L/999 (0.008")	n/a	n/a	4	01-05-01
Live Load Deflection	L/999 (0.006")	n/a	n/a	5	01-05-01
Max Defl.	0.008"	n/a	n/a	4	01-05-01
Span / Depth	3.5				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 2-1/2"	703 lbs	36.1%	34.3%	LF259
B2	Hanger 2" x 2-1/2"	669 lbs	34.4%	32.6%	LF259

Cautions

Web stiffeners required at bearing B1.
Hanger LF259 requires (10) 10dx1.5 face nails, (2) 10dx1.5 joist nails.
Web stiffeners required at bearing B2.
Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist
Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist



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

F8-A

Dry | 1 span | No cant.

December 16, 2020 14:30:42

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

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

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

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

Calculations assume member is fully braced.

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

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

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F8-B

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 14:30:42

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

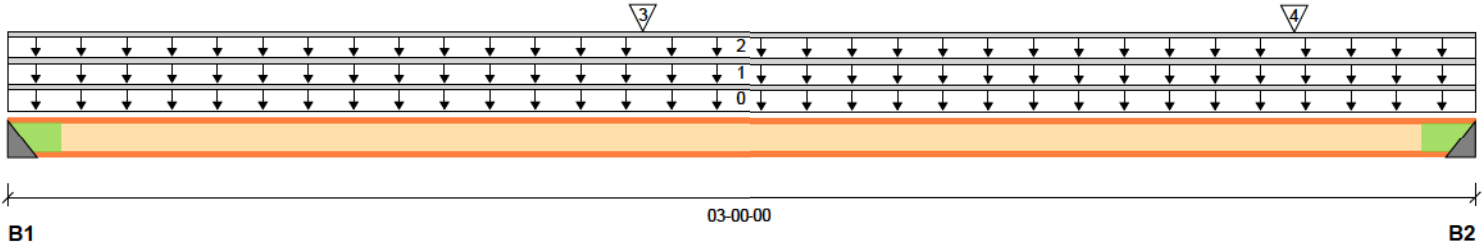
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Total Horizontal Product Length = 03-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	191 / 0	95 / 0		
B2, 2"	277 / 0	137 / 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	03-00-00	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	03-00-00	Top		4			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	03-00-00	Top	34	13			n/a
3	J5	Conc. Pt. (lbs)	L	01-03-09	01-03-09	Back	220	104			n/a
4	J5	Conc. Pt. (lbs)	L	02-07-09	02-07-09	Back	145	71			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	421 ft-lbs	4095 ft-lbs	10.3%	1	01-03-09
End Reaction	587 lbs	2050 lbs	28.7%	1	03-00-00
End Shear	575 lbs	1830 lbs	31.4%	1	02-10-00
Total Load Deflection	L/999 (0.007")	n/a	n/a	4	01-03-09
Live Load Deflection	L/999 (0.005")	n/a	n/a	5	01-03-09
Max Defl.	0.007"	n/a	n/a	4	01-03-09
Span / Depth	3.5				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1 Hanger	2" x 2-1/2"	406 lbs	20.9%	19.8%	LF259
B2 Hanger	2" x 2-1/2"	587 lbs	30.2%	28.7%	LF259

Cautions

Web stiffeners required at bearing B1.
Hanger LF259 requires (10) 10dx1.5 face nails, (2) 10dx1.5 joist nails.
Web stiffeners required at bearing B2.
Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist
Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist



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

F8-B

Dry | 1 span | No cant.

December 16, 2020 14:30:42

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

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

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

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

Calculations assume member is fully braced.

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

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

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

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F8-C

Dry | 1 span | No cant.

December 16, 2020 14:30:42

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Description: Level - Ground Floor

City, Province, Postal Code:

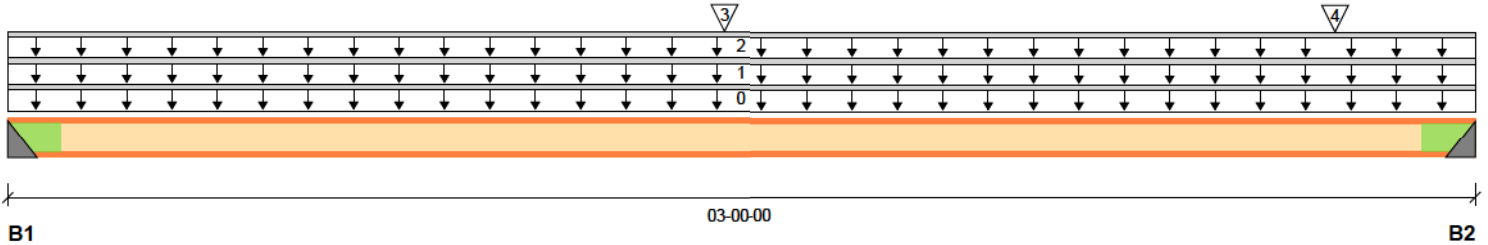
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	256 / 0	127 / 0		
B2, 2"	434 / 0	213 / 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	03-00-00	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	03-00-00	Top		4			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	03-00-00	Top	34	13			n/a
3	J1	Conc. Pt. (lbs)	L	01-05-09	01-05-09	Back	371	179			n/a
4	J1	Conc. Pt. (lbs)	L	02-08-09	02-08-09	Back	216	104			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	658 ft-lbs	4095 ft-lbs	16.1%	1	01-05-09
End Reaction	917 lbs	2050 lbs	44.7%	1	03-00-00
End Shear	905 lbs	1830 lbs	49.4%	1	02-10-00
Total Load Deflection	L/999 (0.011")	n/a	n/a	4	01-05-09
Live Load Deflection	L/999 (0.008")	n/a	n/a	5	01-05-09
Max Defl.	0.011"	n/a	n/a	4	01-05-09
Span / Depth	3.5				



Bearing Supports

	Dim. (LxW)	Demand	Demand/ Resistance	Demand/ Resistance	Material
B1 Hanger	2" x 2-1/2"	544 lbs	28.0%	26.5%	LF259
B2 Hanger	2" x 2-1/2"	917 lbs	47.2%	44.7%	LF259

Cautions

Web stiffeners required at bearing B1.
Hanger LF259 requires (10) 10dx1.5 face nails, (2) 10dx1.5 joist nails.
Web stiffeners required at bearing B2.
Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist
Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist



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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 ENGINEERING NOTE PAGE IS AN INT CALCULATION SUMM CONTAINS SPECIFIC USED IN THE DESIGN OF THIS COMPONENT.

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

F8-C

Dry | 1 span | No cant.

December 16, 2020 14:30:42

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

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

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

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

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

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

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

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Disclosure

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



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

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

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READ ALL NOTES ON ENGINEERING NOTE PAGE IS AN INT CALCULATION SUMM CONTAINS SPECIFICA USED IN THE DESIGN OF THIS COMPONENT.

F9-A

Dry | 1 span | No cant.

December 16, 2020 14:30:42

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Description: Level - Ground Floor

City, Province, Postal Code:

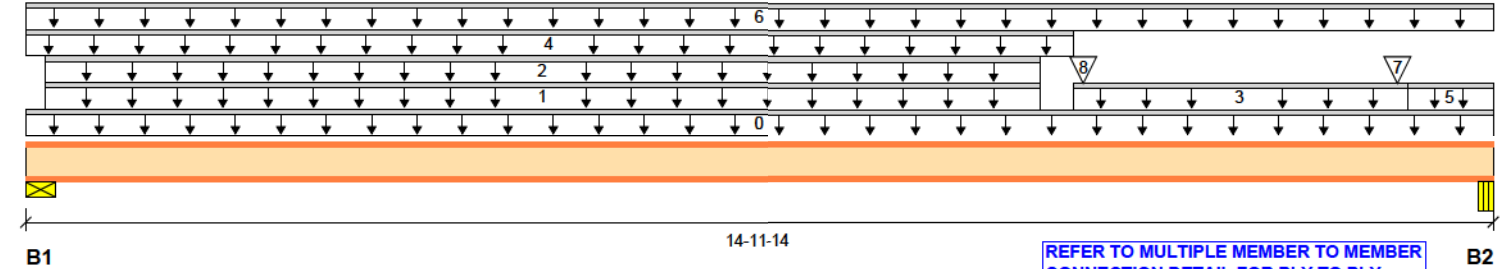
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	275 / 0	145 / 0		
B2, 2-5/8"	490 / 0	226 / 0		

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

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

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	14-11-14	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	00-02-06	10-04-07	Top		1			n/a
2		Unf. Lin. (lb/ft)	L	00-02-06	10-04-05	Top		2			n/a
3		Unf. Lin. (lb/ft)	L	10-08-06	14-01-06	Top	34	13			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	10-08-06	Top	8	3			n/a
5		Unf. Lin. (lb/ft)	L	14-01-06	14-11-14	Top	8	3			n/a
6		Unf. Lin. (lb/ft)	L	00-00-00	14-11-14	Top	19	7			n/a
7	F7	Conc. Pt. (lbs)	L	14-00-02	14-00-02	Back	67	26			n/a
8	F7	Conc. Pt. (lbs)	L	10-09-10	10-09-10	Back	208	97			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	2920 ft-lbs	4095 ft-lbs	71.3%	1	10-00-12
End Reaction	1018 lbs	1697 lbs	60.0%	1	14-11-14
End Shear	1006 lbs	1830 lbs	55.0%	1	14-09-04
Total Load Deflection	L/381 (0.463")	n/a	63.0%	4	07-10-07
Live Load Deflection	L/571 (0.309")	n/a	63.0%	5	08-00-03
Max Defl.	0.463"	n/a	46.3%	4	07-10-07
Span / Depth	18.6				



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Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	594 lbs	16.3%	35.9%	Spruce-Pine-Fir
B2	Beam 2-5/8" x 2-1/2"	1018 lbs	25.2%	60.0%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O8
BC CALC® analysis is based on Canadian Limit States Design, as per NBC
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9



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

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

F9-B

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 14:30:42

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Address:

TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

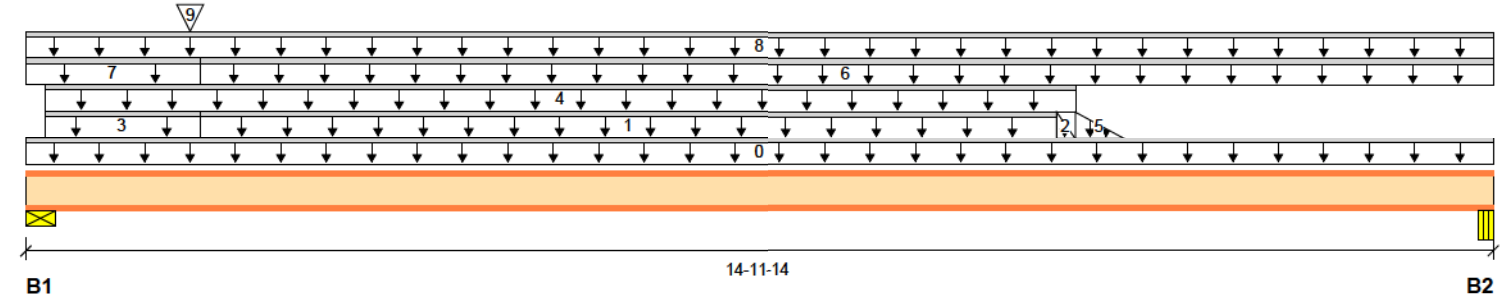
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



Total Horizontal Product Length = 14'-11-14"

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	696 / 0	360 / 0		
B2, 2-5/8"	263 / 0	137 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	14-11-14	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	01-09-06	10-06-06	Top		1			n/a
2		Trapezoidal (lb/ft)	L	10-06-06		Top		1			n/a
					10-08-11			0			
3		Unf. Lin. (lb/ft)	L	00-02-06	01-09-06	Top		8			n/a
4		Unf. Lin. (lb/ft)	L	00-02-06	10-08-11	Top		3			n/a
5		Trapezoidal (lb/ft)	L	10-08-11		Top		3			n/a
					11-02-11			0			
6		Unf. Lin. (lb/ft)	L	01-09-06	14-11-14	Top	8	3			n/a
7		Unf. Lin. (lb/ft)	L	00-00-00	01-09-06	Top	64	24			n/a
8		Unf. Lin. (lb/ft)	L	00-00-00	14-11-14	Top	21	8			n/a
9	F8	Conc. Pt. (lbs)	L	01-08-02	01-08-02	Back	434	213			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	2580 ft-lbs	4095 ft-lbs	63.0%	1	05-08-15
End Reaction	1493 lbs	1653 lbs	90.3%	1	00-00-00
End Shear	1460 lbs	1830 lbs	79.8%	1	00-02-06
Total Load Deflection	L/410 (0.431")	n/a	58.6%	4	06-11-11
Live Load Deflection	L/632 (0.279")	n/a	57.0%	5	06-11-11
Max Defl.	0.431"	n/a	43.1%	4	06-11-11
Span / Depth	18.6				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	1493 lbs	40.9%	90.3%	East Gwillimbury
B2	Beam 2-5/8" x 2-1/2"	566 lbs	14.0%	33.4%	Building Standards Branch BCN #15487

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

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

F9-B

Dry | 1 span | No cant.

December 16, 2020 14:30:42

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

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

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

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

Calculations assume member is fully braced.

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

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

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Disclosure

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



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Severage Systems			
Zoning			

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READ ALL NOTES ON ENGINEERING NOTE PAGE IS AN INT CALCULATION SUMM CONTAINS SPECIFICA USED IN THE DESIGN OF THIS COMPONENT.

F9-C

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 14:30:42

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...3 ENGG\BRENTWOOD 1.isl

Address:

TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

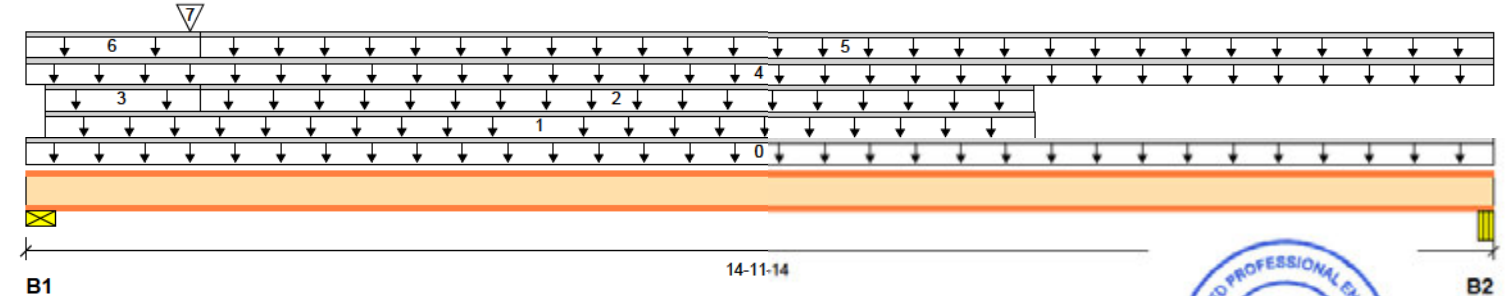
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	684 / 0	353 / 0		
B2, 2-5/8"	430 / 0	206 / 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	14-11-14	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	00-02-06	10-03-11	Top		3			n/a
2		Unf. Lin. (lb/ft)	L	01-09-06	10-03-08	Top		4			n/a
3		Unf. Lin. (lb/ft)	L	00-02-06	01-09-06	Top		8			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	14-11-14	Top	22	8			n/a
5		Unf. Lin. (lb/ft)	L	01-09-06	14-11-14	Top	31	12			n/a
6		Unf. Lin. (lb/ft)	L	00-00-00	01-09-06	Top	64	24			n/a
7	F8	Conc. Pt. (lbs)	L	01-08-02	01-08-02	Front	256	127			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	3587 ft-lbs	4095 ft-lbs	87.6%	1	06-10-00
End Reaction	1467 lbs	1653 lbs	88.7%	1	00-00-00
End Shear	1432 lbs	1830 lbs	78.3%	1	00-02-06
Total Load Deflection	L/296 (0.596")	n/a	81.1%	4	07-02-13
Live Load Deflection	L/449 (0.393")	n/a	80.3%	5	07-04-06
Max Defl.	0.596"	n/a	59.6%	4	07-02-13
Span / Depth	18.6				

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Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	1467 lbs	40.1%	88.7%	Spruce-Pine-Fir
B2	Beam 2-5/8" x 2-1/2"	903 lbs	22.4%	53.2%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O8
BC CALC® analysis is based on Canadian Limit States Design, as per NBC
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9



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READ ALL NOTES ON ENGINEERING NOTE PAGE IS AN INT CALCULATION SUMM CONTAINS SPECIFIC USED IN THE DESIGN OF THIS COMPONENT.

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

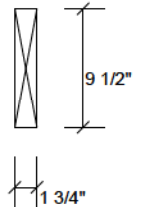
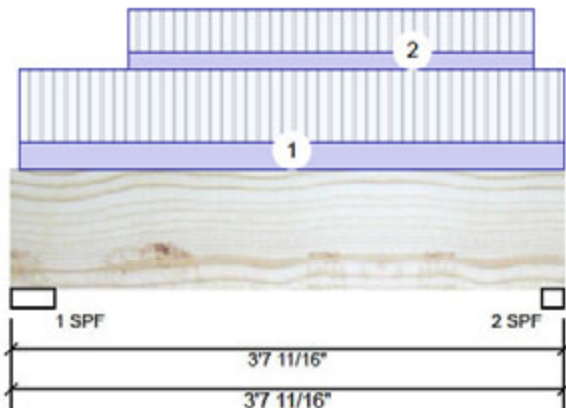


Client: GREENPARK
Project: TRINAR HALL
Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
Input by: RCO
Job Name: BRENTWOOD 1 (ELEV. 3)
Project #:

F1-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	534	208	0	0
2	560	217	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.438"	29%	260 / 801	1060 L	1.25D+1.5L
2 - SPF	1.750"	59%	271 / 840	1111 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	912 ft-lb	1'10 7/8"	11362 ft-lb	0.080 (8%)	1.25D+1.5L	L
Unbraced	912 ft-lb	1'10 7/8"	9606 ft-lb	0.095 (9%)	1.25D+1.5L	L
Shear	767 lb	1'3/16"	4638 lb	0.165 (17%)	1.25D+1.5L	L
Perm Defl in. (L/15091)	0.003	1'10 3/4"	0.111 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.007 (L/5845)	1'10 7/8"	0.111 (L/360)	0.060 (6%)	L	L
TL Defl inch	0.009 (L/4213)	1'10 7/8"	0.167 (L/240)	0.060 (6%)	D+L	L

Design Notes

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

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-11 to 3-7-11		Top	79 PLF	210 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-9-4 to 3-5-4		Far Face	48 PLF	128 PLF	0 PLF	0 PLF	
	Self Weight				4 PLF				



Notes

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

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper ponding

This design is valid up to

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

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



CSD | DRAW DESIGN BUILD

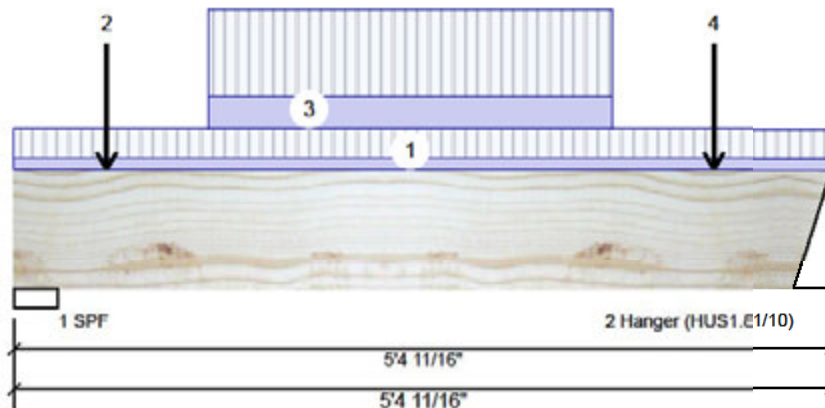


Client: GREENPARK
Project: TRINAR HALL
Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
Input by: RCO
Job Name: BRENTWOOD 1 (ELEV. 3)
Project #:

F2-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	741	288	0	0
2	642	251	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	39%	360 / 1112	1472 L	1.25D+1.5L
2 - Hanger	3.000"	33%	313 / 962	1276 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1690 ft-lb	2'8 1/4"	11362 ft-lb	0.149 (15%)	1.25D+1.5L	L
Unbraced	1690 ft-lb	2'8 1/4"	7494 ft-lb	0.226 (23%)	1.25D+1.5L	L
Shear	1317 lb	1' 1/4"	4638 lb	0.284 (28%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/7335)	2'8 7/16"	0.166 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.021 (L/2847)	2'8 7/16"	0.166 (L/360)	0.130 (13%)	L	
TL Defl inch	0.029 (L/2051)	2'8 7/16"	0.249 (L/240)	0.120 (12%)	D+L	L

Design Notes

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

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 5-4-9	1-10-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-7-5		Far Face	88 lb	234 lb	0 lb	0 lb	J6
3	Part. Uniform	1-3-5 to 3-11-5		Far Face	81 PLF	217 PLF	0 PLF	0 PLF	
4	Point	4-7-5		Far Face	63 lb	167 lb	0 lb	0 lb	J5
	Self Weight				4 PLF				



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 ponding

This design is valid up to

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

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

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



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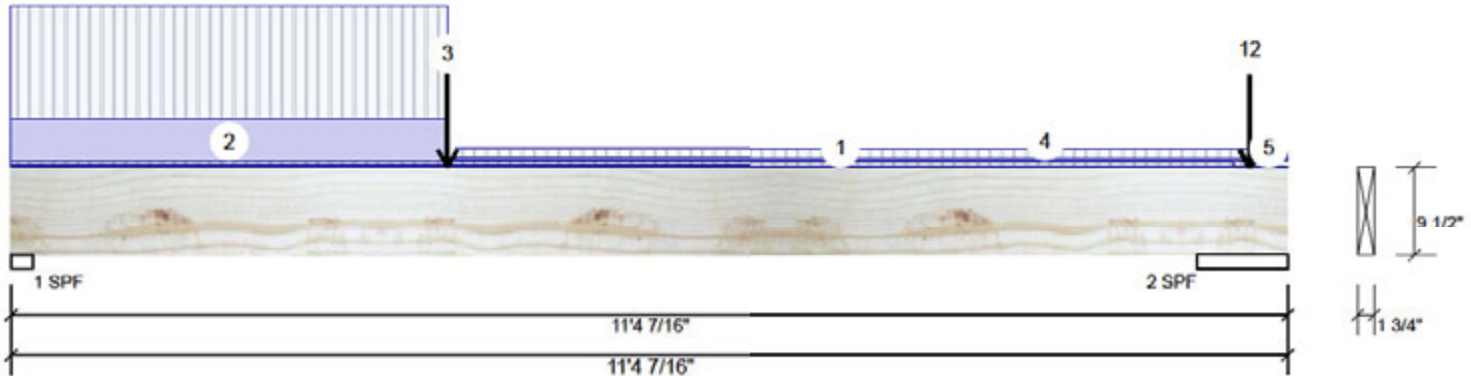


Client: GREENPARK
Project: TRINAR HALL
Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
Input by: RCO
Job Name: BRENTWOOD 1 (ELEV. 3)
Project #:

F3-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1272	504	0	0
2	1446	717	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	2.375"	99% 630 / 1907	2537 L	1.25D+1.5L
2 - SPF	9.750"	43% 896 / 2170	3065 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5772 ft-lb	3'10 9/16"	11362 ft-lb	0.508 (51%)	1.25D+1.5L	L
Unbraced	5772 ft-lb	3'10 9/16"	5791 ft-lb	0.997 (100%)	1.25D+1.5L	L
Shear	2077 lb	11 1/8"	4638 lb	0.448 (45%)	1.25D+1.5L	L
Perm Defl in.	0.085 (L/1478)	4'10 1/8"	0.350 (L/360)	0.240 (24%)	D	Uniform
LL Defl inch	0.211 (L/597)	4'9 13/16"	0.350 (L/360)	0.600 (60%)	L	L
TL Defl inch	0.296 (L/425)	4'9 7/8"	0.524 (L/240)	0.560 (56%)	D+L	L

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top must be laterally braced at a maximum of 6'5 1/4" o.c.
- 4 Bottom braced at bearings.

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-10-12	0-2-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 3-10-10		Top	90 PLF	240 PLF	0 PLF	0 PLF	
3	Point	3-10-10		Far Face	251 lb	642 lb	0 lb	0 lb	F2
4	Tie-In	3-11-8 to 11-4-7	0-5-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	10-10-12 to 11-4-7	0-3-4 to 0-0-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	11-0-6		Top	292 lb			0 lb	F5 F5
7	Point	11-0-6		Top	11 lb			0 lb	

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 ponding

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Building Code	H. Authier	43236	2021-02-24
Seismic System			
Zoning			

Kott Lumber Company
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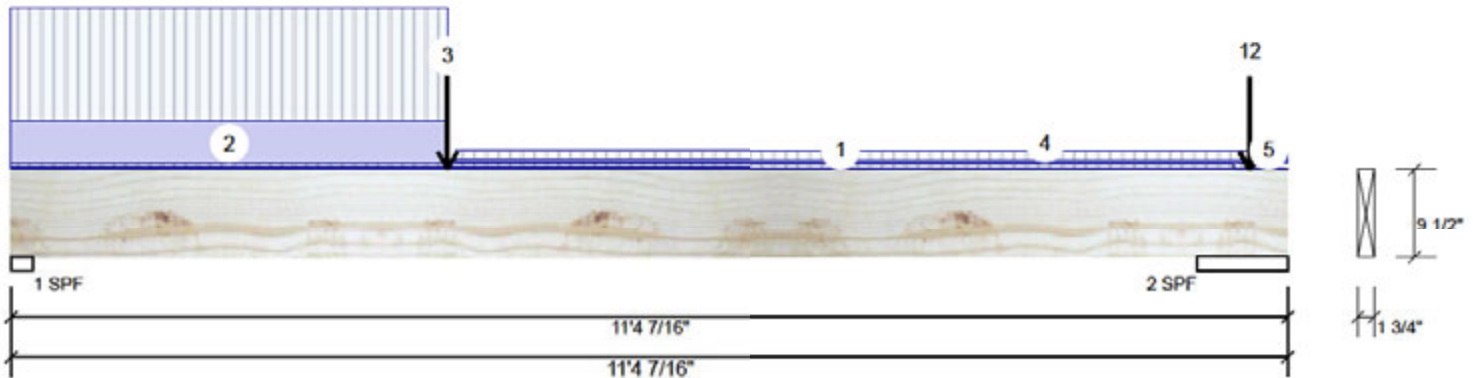


Client: GREENPARK
 Project: TRINAR HALL
 Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
 Input by: RCO
 Job Name: BRENTWOOD 1 (ELEV. 3)
 Project #:

F3-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Point	11-0-6		Top	12 lb	33 lb	0 lb	0 lb	
9	Point	11-0-6		Top	88 lb	222 lb	0 lb	0 lb	J8
10	Point	11-0-6		Top	15 lb	41 lb	0 lb	0 lb	J6
11	Point	11-0-6		Top	1 lb	2 lb	0 lb	0 lb	J7
12	Point	11-0-6		Top	75 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Self Weight				4 PLF				

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Lumber

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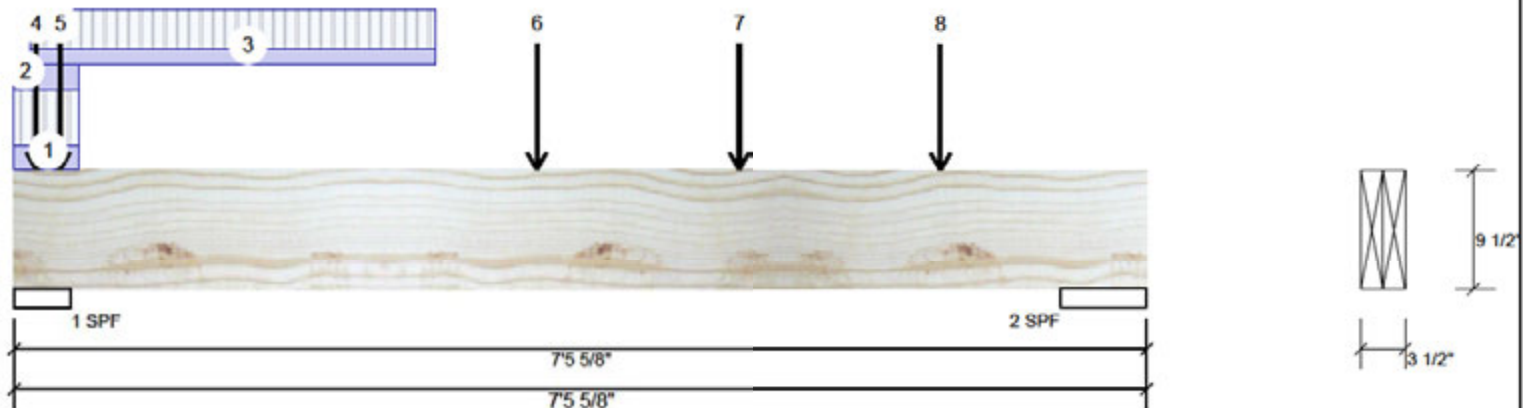


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Date: 12/16/2020
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Job Name: BRENTWOOD 1 (ELEV. 3)
Project #:

F4-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1856	876	0	0
2	628	265	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF 4.500"	40%	1095 / 2784	3879 L	1.25D+1.5L
2 - SPF 6.875"	9%	331 / 941	1272 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2165 ft-lb	3'5 1/16"	22724 ft-lb	0.095 (10%)	1.25D+1.5L	L
Unbraced	2165 ft-lb	3'5 1/16"	21852 ft-lb	0.099 (10%)	1.25D+1.5L	L
Shear	1459 lb	6'2"	9277 lb	0.157 (16%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/9488)	3'7 5/8"	0.222 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.020 (L/3939)	3'7 5/8"	0.222 (L/360)	0.090 (9%)	L	L
TL Defl inch	0.029 (L/2784)	3'7 5/8"	0.332 (L/240)	0.090 (9%)	D+L	L

Design Notes

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-5-2		Top	76 PLF	179 PLF	0 PLF	0 PLF	J1
2	Part. Uniform	0-0-0 to 0-5-2		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-1-5 to 2-9-5		Near Face	48 PLF	128 PLF	0 PLF	0 PLF	
4	Point	0-1-12		Far Face	60 lb			0 lb	F5
5	Point	0-3-10		Top	512 lb			0 lb	B4 B4

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 ponding

This design is valid for

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Building Code	H. Authier	43236	2021-02-24
Seismic System			
Zoning			

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



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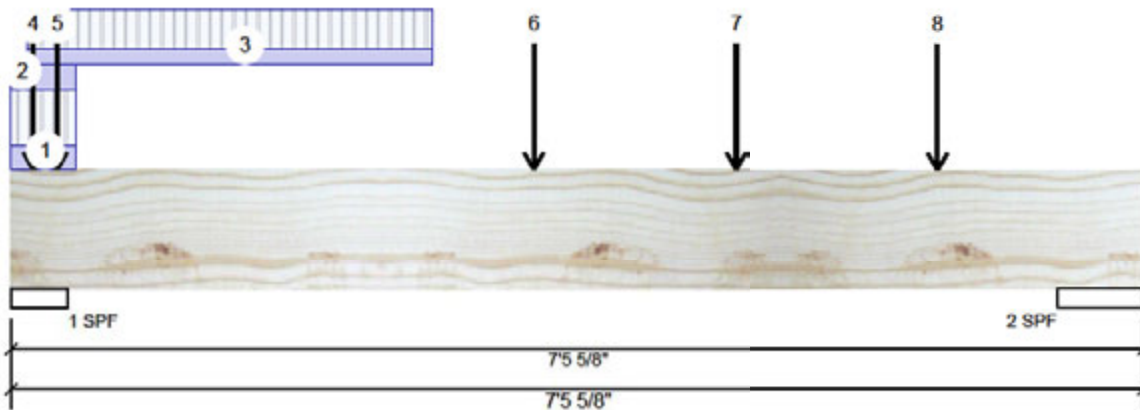


Client: GREENPARK
 Project: TRINAR HALL
 Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
 Input by: RCO
 Job Name: BRENTWOOD 1 (ELEV. 3)
 Project #:

F4-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	3-5-5		Near Face	100 lb	276 lb	0 lb	0 lb	J6
7	Point	4-9-5		Near Face	100 lb	290 lb	0 lb	0 lb	J6
8	Point	6-1-5		Near Face	106 lb	280 lb	0 lb	0 lb	J6
	Self Weight				8 PLF				

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Lumber

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Zoning			

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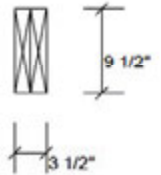
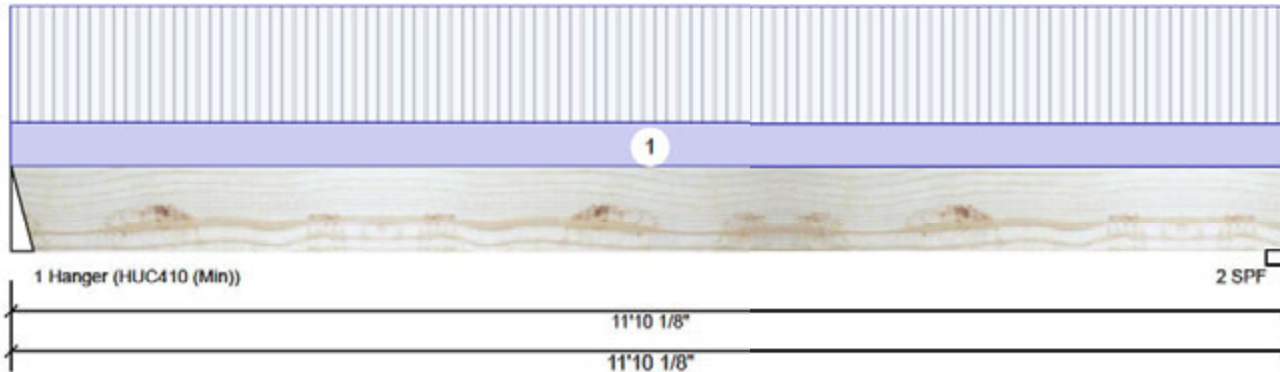


Client: GREENPARK
Project: TRINAR HALL
Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
Input by: RCO
Job Name: BRENTWOOD 1 (ELEV. 3)
Project #:

F5-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	108	86	0	0
2	108	86	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.500"	4%	107 / 162	269 L	1.25D+1.5L
2 - SPF	2.375"	5%	107 / 162	269 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	759 ft-lb	5'11 1/8"	22724 ft-lb	0.033 (3%)	1.25D+1.5L	L
Unbraced	759 ft-lb	5'11 1/8"	20084 ft-lb	0.038 (4%)	1.25D+1.5L	L
Shear	227 lb	10'11"	9277 lb	0.024 (2%)	1.25D+1.5L	L
Perm Defl in (L/11135)	0.012	5'11 1/8"	0.385 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.016 (L/8830)	5'11 1/8"	0.385 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.028 (L/4925)	5'11 1/8"	0.578 (L/240)	0.050 (5%)	D+L	L

Design Notes

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 11-10-2	0-5-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				8 PLF				



Notes

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Lumber

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

Handling & Installation

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

6. For flat roofs provide proper ponding

This design is valid up to

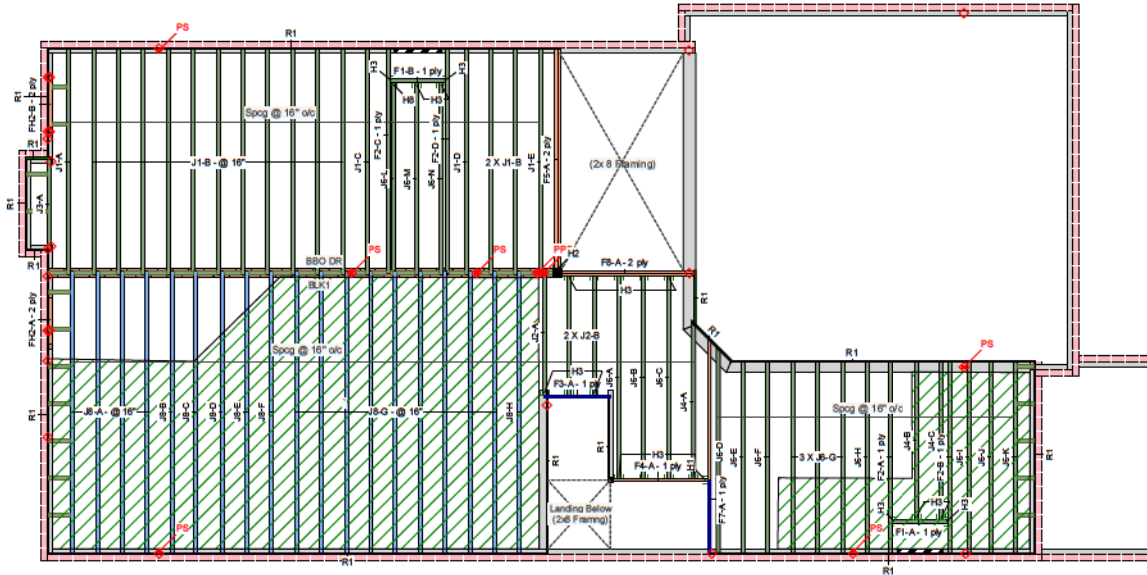
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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Seismic System			
Zoning			

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



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Discipline	Reviewer	BCIN	Date
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Sewage System			
Zoning			

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

Ground Floor LVL/LSL (Flush)								JOB INFORMATION	
Label	Description	Width	Depth	Qty	Piles	Pcs	Length	Builder	GREENPARK
F5	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	12-0-0	Project	TRINAR HALL EAST GWILLIMBURY, ON.
F7	Forex 2.0E-3000Fb LVL	1.75	9.5			1	12-0-0	Sales Rep	RM
F8	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	8-0-0	Designer	RCO
F4	Forex 2.0E-3000Fb LVL	1.75	9.5			1	6-0-0	Plotted	December 16, 2020
FH2	Forex 2.0E-3000Fb LVL	1.75	9.5	2	2	4	4-0-0	Layout Name	BRENTWOOD 1 (EL.3) DECK CONDITION
F3	Forex 2.0E-3000Fb LVL	1.75	9.5			1	4-0-0	Job Path	C:\Users\rochavillo\Documents\WORK FROM HOME\GREENPARK\TRINAR HALL\BRENTWOOD 1ELEV\3FLOOR\BRENTWOOD 1 EL.3 ENGG\DECK CONDITION\BRENTWOOD 1.lvl
I Joist (Flush)								DESIGN CRITERIA	
Label	Description	Width	Depth	Qty	Piles	Pcs	Length	Ground Floor	
F2	AJS 140	2.5	9.5			4	12-0-0	Design Method	LSD (Canada)
F1	AJS 140	2.5	9.5			2	4-0-0	Building Code	NBCC 2015 / OBC 2012
J1	AJS 140	2.5	9.5			17	14-0-0	Floor	
J6	AJS 140	2.5	9.5			16	12-0-0	Loads	
J4	AJS 140	2.5	9.5			3	10-0-0	Live	40
J2	AJS 140	2.5	9.5			3	8-0-0	Dead	15
J3	AJS 140	2.5	9.5			1	6-0-0	Deflection Joist	
J8	AJS 20	2.5	9.5			19	16-0-0	LL Span L/	480
Blocking								TL Span U/	360
Label	Description	Width	Depth	Qty	Piles	Pcs	Length	LL Cant 2L/	480
BLK1	AJS 140	2.5	9.5	LinFt		Varies	36-0-0	TL Cant 2L/	360
Rim Board								Deflection Girder	
Label	Description	Width	Depth	Qty	Piles	Pcs	Length	LL Span L/	360
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			13	12-0-0	LL Span U/	240
Hanger								LL Cant 2L/	480
				Beam/Girder		Supported Member		TL Cant 2L/	360
Label	Pcs	Description	Skew	Slope	fasteners	fasteners		Decking	
H1	1	HUS1.81/10			30 16d	10 16d		Decking	OSB
H2	1	HUC410 (Min)			14 16d	6 10d		Thickness	3/4"
H3	20	LF259						Fastener	Nailed & Glued
H8	1	LT259						Vibration	
1. All blocking to be cut from 12' joists								CCMC References	
2. 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length								Boise - 12472-R, 12787-R	
3. Ends of joists to be laterally supported								LP - 12412-R	
4. Packing of Steel beams and attachment by others								Forex - 14056-R	
5. Shower and water closet flange locations are approximate only, consult architectural drawing for exact locations								Kott Lumber Company	
6. Beams identified as "B" are dropped and supplied by others								14 Anderson Blvd	
7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls								Stouffville, Ontario	
8. Load transfer blocks to be installed under all point loads								Canada	
9. Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements								L4A 7X4	
10. Hangers and Fasteners to be installed as per manufacturer								905-642-4400	
11. Framing shown on this layout may deviate from architectural drawings. Arch/ Eng to review and approve the deviation prior to construction.								Legend	
Legend								PS	
								Point Load Support	
								Load from Above	
								Wall	
								Wall Opening	
								Norbord Rimboard Plus 1.125 X 9.5	
								AJS 140 9.5	
								AJS 20 9.5	
								Forex 2.0E-3000Fb LVL 1.75 X 9.5	

F1-A

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 15:26:27

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...DITON\BRENTWOOD 1.isl

Address:

TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

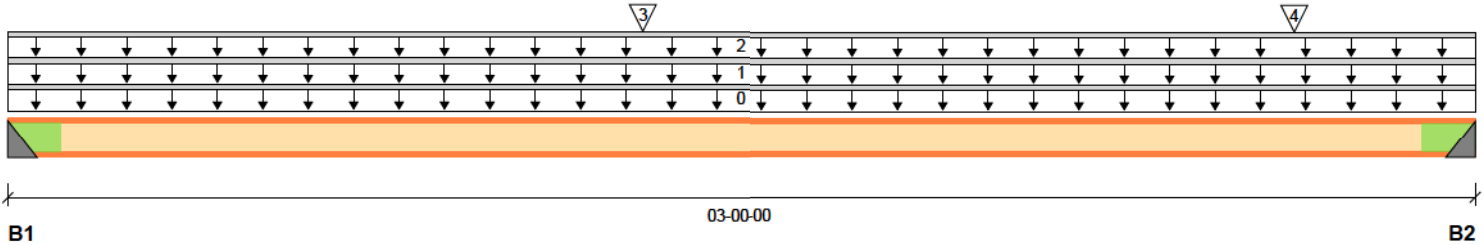
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	191 / 0	95 / 0		
B2, 2"	277 / 0	137 / 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	03-00-00	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	03-00-00	Top		4			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	03-00-00	Top	34	13			n/a
3	J4	Conc. Pt. (lbs)	L	01-03-09	01-03-09	Back	220	104			n/a
4	J4	Conc. Pt. (lbs)	L	02-07-09	02-07-09	Back	145	71			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	421 ft-lbs	4095 ft-lbs	10.3%	1	01-03-09
End Reaction	587 lbs	2050 lbs	28.7%	1	03-00-00
End Shear	575 lbs	1830 lbs	31.4%	1	02-10-00
Total Load Deflection	L/999 (0.007")	n/a	n/a	4	01-03-09
Live Load Deflection	L/999 (0.005")	n/a	n/a	5	01-03-09
Max Defl.	0.007"	n/a	n/a	4	01-03-09
Span / Depth	3.5				



Bearing Supports

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1 Hanger	2" x 2-1/2"	406 lbs	20.9%	19.8%	LF259
B2 Hanger	2" x 2-1/2"	587 lbs	30.2%	28.7%	LF259

Cautions

Web stiffeners required at bearing B1.
Hanger LF259 requires (10) 10dx1.5 face nails, (2) 10dx1.5 joist nails.
Web stiffeners required at bearing B2.
Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist
Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist



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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 ENGINEERING NOTE PAGE IS AN INT CALCULATION SUMM CONTAINS SPECIFIC USED IN THE DESIGN OF THIS COMPONENT.

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

F1-A

Dry | 1 span | No cant.

December 16, 2020 15:26:27

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Doc...DITON\BRENTWOOD 1.isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

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

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

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

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

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

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

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

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



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

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

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READ ALL NOTES ON ENGINEERING NOTE PAGE IS AN INT CALCULATION SUMM CONTAINS SPECIFICA USED IN THE DESIGN OF THIS COMPONENT.

F1-B

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 15:26:27

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...DITON\BRENTWOOD 1.isl

Address:

TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

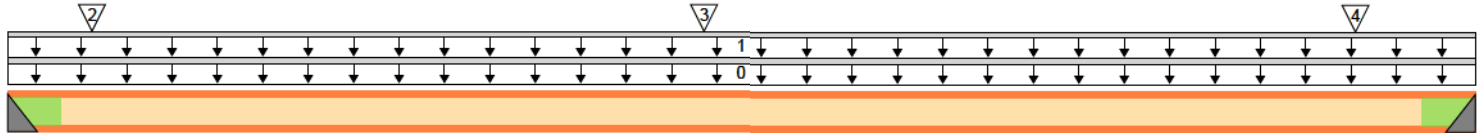
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



B1
03-00-00
Total Horizontal Product Length = 03-00-00
B2

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	355 / 0	137 / 0		
B2, 2"	338 / 0	130 / 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	03-00-00	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	03-00-00	Top	34	13			n/a
2	J6	Conc. Pt. (lbs)	L	00-02-01	00-02-01	Front	156	59			n/a
3	J6	Conc. Pt. (lbs)	L	01-05-01	01-05-01	Front	262	98			n/a
4	J6	Conc. Pt. (lbs)	L	02-09-01	02-09-01	Front	171	64			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	449 ft-lbs	4095 ft-lbs	11.0%	1	01-05-01
End Reaction	703 lbs	2050 lbs	34.3%	1	00-00-00
End Shear	657 lbs	1830 lbs	35.9%	1	02-10-00
Total Load Deflection	L/999 (0.008")	n/a	n/a	4	01-05-01
Live Load Deflection	L/999 (0.006")	n/a	n/a	5	01-05-01
Max Defl.	0.008"	n/a	n/a	4	01-05-01
Span / Depth	3.5				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 2-1/2"	703 lbs	36.1%	34.3%	LF259
B2	Hanger 2" x 2-1/2"	669 lbs	34.4%	32.6%	LF259

Cautions

Web stiffeners required at bearing B1.
Hanger LF259 requires (10) 10dx1.5 face nails, (2) 10dx1.5 joist nails.
Web stiffeners required at bearing B2.
Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist
Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist



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

F1-B

Dry | 1 span | No cant.

December 16, 2020 15:26:27

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Doc...DITON\BRENTWOOD 1.isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

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

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

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

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

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

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

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Disclosure

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

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F2-A

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 15:26:27

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...DITON\BRENTWOOD 1.isl

Address:

TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

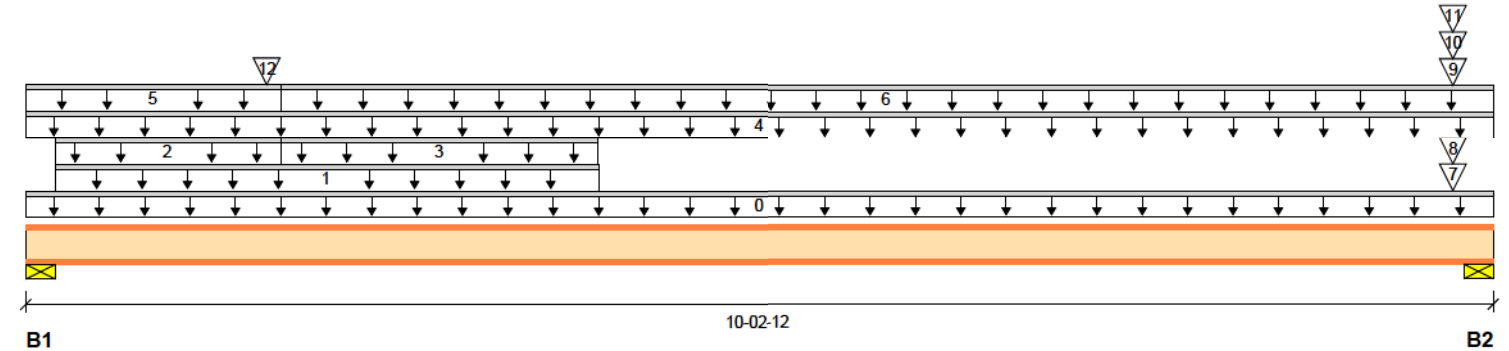
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



Total Horizontal Product Length = 10-02-12

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	482 / 0	238 / 0		
B2, 6-7/8"	614 / 0	358 / 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	10-02-12	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	00-02-07	03-11-14	Top		3			n/a
2		Unf. Lin. (lb/ft)	L	00-02-07	01-09-06	Top		8			n/a
3		Unf. Lin. (lb/ft)	L	01-09-06	03-11-13	Top		4			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	10-02-12	Top	25	9			n/a
5		Unf. Lin. (lb/ft)	L	00-00-00	01-09-06	Top	64	24			n/a
6		Unf. Lin. (lb/ft)	L	01-09-06	10-02-12	Top	28	11			n/a
7		Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	24	9			n/a
8		Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	1				n/a
9		Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	1				n/a
10	J6	Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	269	101			n/a
11	Wall Self Weight	Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top		107			n/a
12	F1	Conc. Pt. (lbs)	L	01-08-02	01-08-02	Front	191	95			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1665 ft-lbs	4095 ft-lbs	40.7%	1	04-01-11
End Reaction	1368 lbs	1850 lbs	73.9%	1	10-02-12
End Shear	986 lbs	1830 lbs	53.9%	1	00-02-06
Total Load Deflection	L/889 (0.129")	n/a	27.0%	4	04-08-01
Live Load Deflection	L/999 (0.088")	n/a	n/a	5	04-08-01
Max Defl.	0.129"	n/a	12.9%	4	04-08-01
Span / Depth	12.1				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance	Dema Resis Memt
B1	Wall/Plate 2-3/8" x 2-1/2"	1021 lbs	28.0%	61.8%
B2	Wall/Plate 6-7/8" x 2-1/2"	1368 lbs	12.9%	73.9%

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

F2-A

Dry | 1 span | No cant.

December 16, 2020 15:26:27

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Doc...DITON\BRENTWOOD 1.isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

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

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

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

Calculations assume member is fully braced.

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

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

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

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

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F2-B

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 15:26:27

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...DITON\BRENTWOOD 1.isl

Address:

TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

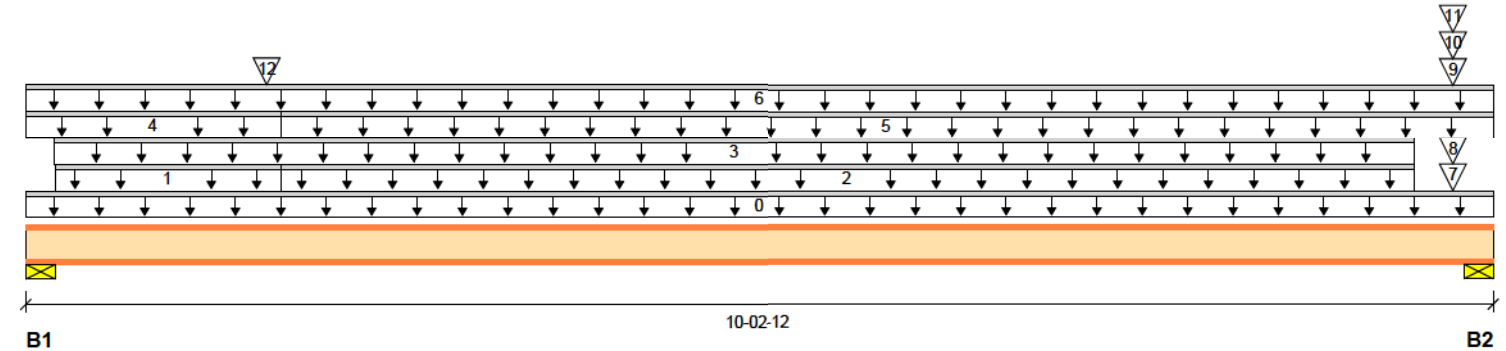
Customer:

Designer: RCO

Code reports:

CCMC 12787-R

Company: GREENPARK



Total Horizontal Product Length = 10-02-12

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	470 / 0	244 / 0		
B2, 6-7/8"	348 / 0	228 / 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	10-02-12	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	00-02-07	01-09-06	Top		8			n/a
2		Unf. Lin. (lb/ft)	L	01-09-06	09-08-02	Top		1			n/a
3		Unf. Lin. (lb/ft)	L	00-02-07	09-08-02	Top		3			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	01-09-06	Top	64	24			n/a
5		Unf. Lin. (lb/ft)	L	01-09-06	10-02-12	Top	9	4			n/a
6		Unf. Lin. (lb/ft)	L	00-00-00	10-02-12	Top	21	8			n/a
7		Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	13	5			n/a
8		Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	1				n/a
9	J6	Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	92	35			n/a
10	J6	Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top	31	12			n/a
11	Wall Self Weight	Conc. Pt. (lbs)	L	09-11-06	09-11-06	Top		60			n/a
12	F1	Conc. Pt. (lbs)	L	01-08-02	01-08-02	Back	277	137			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1390 ft-lbs	4095 ft-lbs	34.0%	1	03-02-10
End Reaction	1010 lbs	1653 lbs	61.1%	1	00-00-00
End Shear	976 lbs	1830 lbs	53.3%	1	00-02-06
Total Load Deflection	L/999 (0.106")	n/a	n/a	4	04-06-09
Live Load Deflection	L/999 (0.069")	n/a	n/a	5	04-06-09
Max Defl.	0.106"	n/a	n/a	4	04-06-09
Span / Depth	12.1				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance	Dema Resis Memt
B1	Wall/Plate 2-3/8" x 2-1/2"	1010 lbs	27.6%	61.1%
B2	Wall/Plate 6-7/8" x 2-1/2"	808 lbs	7.6%	43.7%



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

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

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

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

F2-B

Dry | 1 span | No cant.

December 16, 2020 15:26:27

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Users\rochavillo\Doc...DITON\BRENTWOOD 1.isl

Description: Level - Ground Floor

Specifier:

Designer: RCO

Company: GREENPARK

Notes

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

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

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

Calculations assume member is fully braced.

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

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

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Disclosure

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



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

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

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

READ ALL NOTES ON ENGINEERING NOTE PAGE IS AN INT CALCULATION SUMM CONTAINS SPECIFICA USED IN THE DESIGN OF THIS COMPONENT.

F2-C

Dry | 1 span | No cant.

December 16, 2020 15:26:27

BC CALC® Member Report

Build 7364

Job name:

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

File name: C:\Users\rochavillo\Doc...DITON\BRENTWOOD 1.isl

Description: Level - Ground Floor

City, Province, Postal Code:

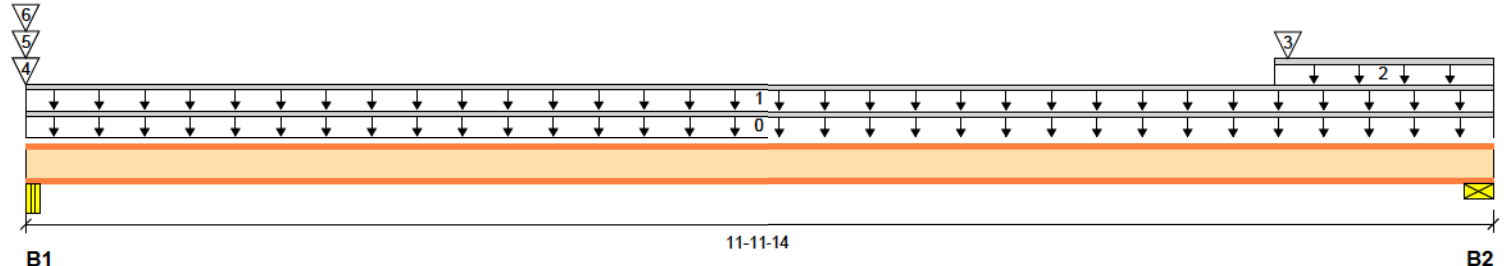
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-5/8"	344 / 0	165 / 0		
B2, 2-3/8"	552 / 0	223 / 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	11-11-14	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	11-11-14	Top	23	9			n/a
2		Unf. Lin. (lb/ft)	L	10-02-08	11-11-14	Top	64	24			n/a
3	F1	Conc. Pt. (lbs)	L	10-03-12	10-03-12	Front	355	137			n/a
4	J1	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	68	25			n/a
5	J8	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	85	32			n/a
6	Wall Self Weight	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top		23			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1563 ft-lbs	4095 ft-lbs	38.2%	1	08-02-06
End Reaction	1107 lbs	1653 lbs	66.9%	1	11-11-14
End Shear	1072 lbs	1830 lbs	58.6%	1	11-09-08
Total Load Deflection	L/841 (0.167")	n/a	28.5%	4	06-05-11
Live Load Deflection	L/999 (0.117")	n/a	n/a	5	06-05-11
Max Defl.	0.167"	n/a	16.7%	4	06-05-11
Span / Depth	14.8				



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Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Beam 2-5/8" x 2-1/2"	723 lbs	17.9%	42.6%	Spruce-Pine-Fir
B2	Wall/Plate 2-3/8" x 2-1/2"	1107 lbs	30.3%	66.9%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O8
BC CALC® analysis is based on Canadian Limit States Design, as per NBC
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9



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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.

READ ALL NOTES ON ENGINEERING NOTE PAGE IS AN INT CALCULATION SUMM CONTAINS SPECIFIC USED IN THE DESIGN OF THIS COMPONENT.

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

F2-D

BC CALC® Member Report

Dry | 1 span | No cant.

December 16, 2020 15:26:27

Build 7364

Job name:

File name: C:\Users\rochavillo\Doc...DITON\BRENTWOOD 1.isl

Address: TRINAR HALL
EAST GWILLIMBURY, ON.

Description: Level - Ground Floor

City, Province, Postal Code:

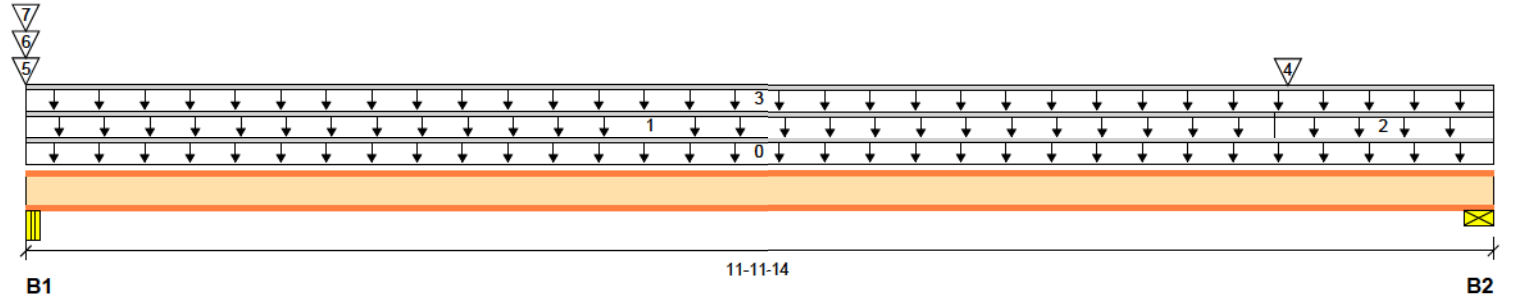
Specifier:

Customer:

Designer: RCO

Code reports: CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-5/8"	258 / 0	118 / 0		
B2, 2-3/8"	548 / 0	222 / 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	11-11-14	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	10-02-08	Top	7	3			n/a
2		Unf. Lin. (lb/ft)	L	10-02-08	11-11-14	Top	64	24			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	11-11-14	Top	20	7			n/a
4	F1	Conc. Pt. (lbs)	L	10-03-12	10-03-12	Back	338	130			n/a
5	J1	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	21	8			n/a
6	J8	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	26	10			n/a
7	Wall Self Weight	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	7				n/a

Controls Summary

Pos. Moment	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1629 ft-lbs	4095 ft-lbs	39.8%	1	07-10-14
End Reaction	1099 lbs	1653 lbs	66.5%	1	11-11-14
End Shear	1066 lbs	1830 lbs	58.3%	1	11-09-08
Total Load Deflection	L/797 (0.176")	n/a	30.1%	4	06-05-11
Live Load Deflection	L/999 (0.124")	n/a	n/a	5	06-05-11
Max Defl.	0.176"	n/a	17.6%	4	06-05-11
Span / Depth	14.8				

Bearing Supports

Bearing Supports	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1 Beam	2-5/8" x 2-1/2"	535 lbs	13.2%	31.5%	Spruce-Pine-Fir
B2 Wall/Plate	2-3/8" x 2-1/2"	1099 lbs	30.1%	66.5%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O8
BC CALC® analysis is based on Canadian Limit States Design, as per NBC
Design based on Dry Service Condition.
Importance Factor: Normal Part code: Part 9

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
ENGINEERING NOTE
NOTE PAGE IS AN INT
CALCULATION SUMM
CONTAINS SPECIFIC
USED IN THE DESIGN OF THIS COMPONENT.



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



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

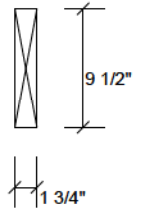
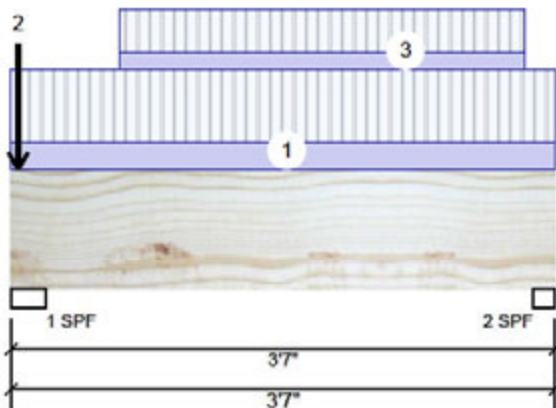


Client: GREENPARK
Project:
Address: TRINAR HALL
EAST GWILLIMBURY, ON.

Date: 12/16/2020
Input by: RCO
Job Name: BRENTWOOD 1 (EL 3) DECK CONDITION
Project #:

F3-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	600	235	0	0
2	560	217	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.750"	40%	293 / 900	1193 L	1.25D+1.5L
2 - SPF	1.750"	59%	271 / 840	1111 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	912 ft-lb	1'10 3/16"	11362 ft-lb	0.080 (8%)	1.25D+1.5L	L
Unbraced	912 ft-lb	1'10 3/16"	9606 ft-lb	0.095 (9%)	1.25D+1.5L	L
Shear	767 lb	11 1/2"	4638 lb	0.165 (17%)	1.25D+1.5L	L
Perm Defl in. (L/15091)	0.003	1'10 1/8"	0.111 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.007 (L/5845)	1'10 1/8"	0.111 (L/360)	0.060 (6%)	L	L
TL Defl inch	0.009 (L/4213)	1'10 1/8"	0.167 (L/240)	0.060 (6%)	D+L	L

Design Notes

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

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-7-0		Top	79 PLF	210 PLF	0 PLF	0 PLF	
2	Point	0-0-9		Far Face	27 lb	66 lb	0 lb	0 lb	J2
3	Part. Uniform	0-8-9 to 3-4-9		Far Face	48 PLF	128 PLF	0 PLF	0 PLF	
	Self Weight				4 PLF				



Notes

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

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper ponding

This design is valid up to

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

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

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



CSD | DRAW DESIGN BUILD

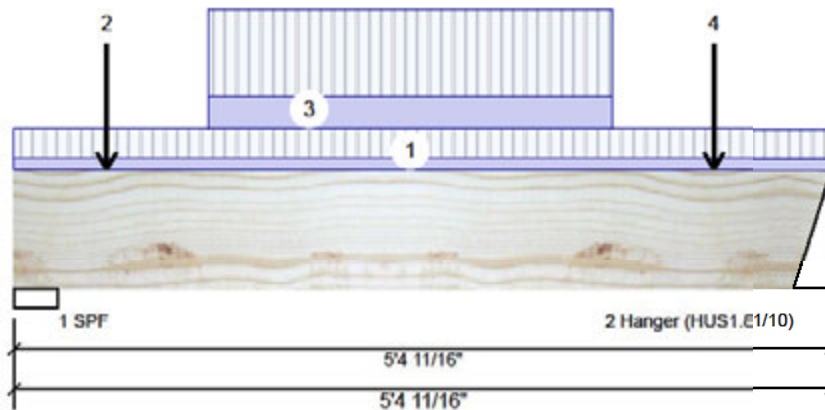


Client: GREENPARK
Project: TRINAR HALL
Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
Input by: RCO
Job Name: BRENTWOOD 1 (EL 3) DECK CONDITION
Project #:

F4-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	741	288	0	0
2	642	251	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	39%	360 / 1112	1472 L	1.25D+1.5L
2 - Hanger	3.000"	33%	313 / 962	1276 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1690 ft-lb	2'8 1/4"	11362 ft-lb	0.149 (15%)	1.25D+1.5L	L
Unbraced	1690 ft-lb	2'8 1/4"	7494 ft-lb	0.226 (23%)	1.25D+1.5L	L
Shear	1317 lb	1' 1/4"	4638 lb	0.284 (28%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/7335)	2'8 7/16"	0.166 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.021 (L/2847)	2'8 7/16"	0.166 (L/360)	0.130 (13%)	L	
TL Defl inch	0.029 (L/2051)	2'8 7/16"	0.249 (L/240)	0.120 (12%)	D+L	L

Design Notes

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 5-4-9	1-10-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-7-5		Far Face	88 lb	234 lb	0 lb	0 lb	J6
3	Part. Uniform	1-3-5 to 3-11-5		Far Face	81 PLF	217 PLF	0 PLF	0 PLF	
4	Point	4-7-5		Far Face	63 lb	167 lb	0 lb	0 lb	J4
	Self Weight				4 PLF				



Notes

Calculated Structures Design 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 ponding

This design is valid up to

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

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



CSD | DRAW DESIGN BUILD

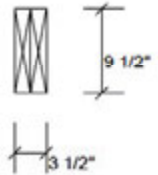
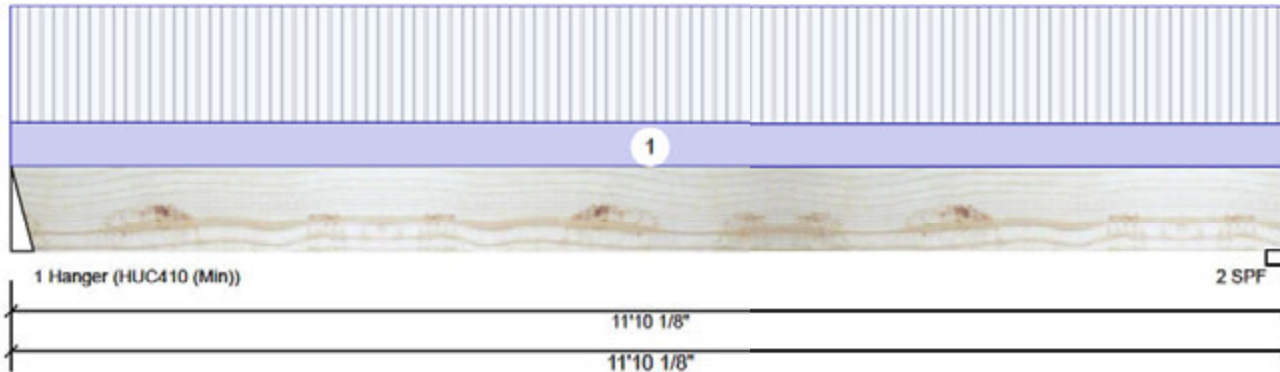


Client: GREENPARK
Project: TRINAR HALL
Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
Input by: RCO
Job Name: BRENTWOOD 1 (EL 3) DECK CONDITION
Project #:

F5-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	108	86	0	0
2	108	86	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - Hanger	2.500"	4%	107 / 162	269 L
2 - SPF	2.375"	5%	107 / 162	269 L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	759 ft-lb	5'11 1/8"	22724 ft-lb	0.033 (3%)	1.25D+1.5L	L
Unbraced	759 ft-lb	5'11 1/8"	20084 ft-lb	0.038 (4%)	1.25D+1.5L	L
Shear	227 lb	10'11"	9277 lb	0.024 (2%)	1.25D+1.5L	L
Perm Defl in. (L/11135)	0.012	5'11 1/8"	0.385 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.016 (L/8830)	5'11 1/8"	0.385 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.028 (L/4925)	5'11 1/8"	0.578 (L/240)	0.050 (5%)	D+L	L

Design Notes

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

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 11-10-2	0-5-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				8 PLF				



East Gwillimbury
Building Standards Branch BCN #15487

Notes

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

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper ponding

This design is valid up to

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

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

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



CSD | DRAW DESIGN BUILD

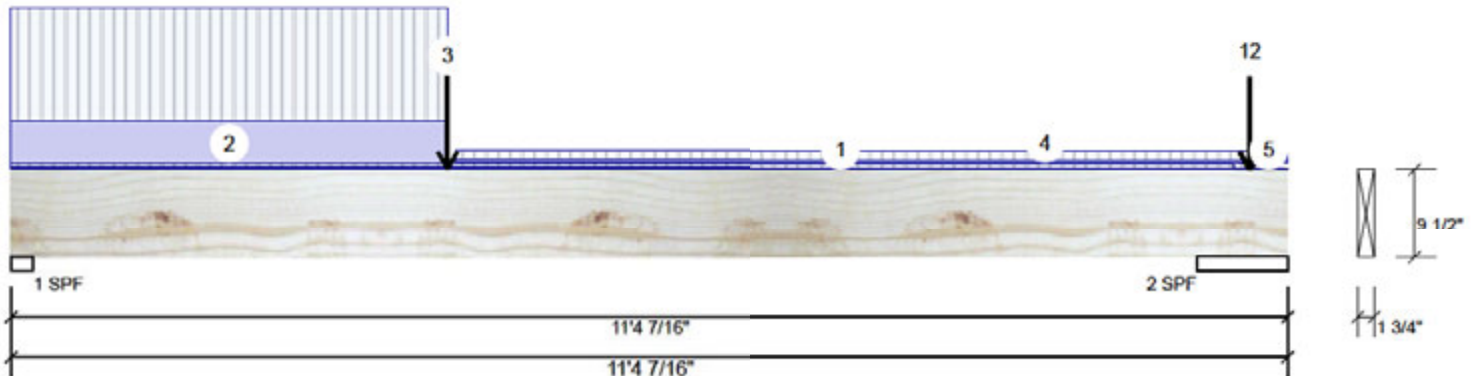


Client: GREENPARK
Project: TRINAR HALL
Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
Input by: RCO
Job Name: BRENTWOOD 1 (EL 3) DECK CONDITION
Project #:

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

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1272	504	0	0
2	1446	717	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	99%	630 / 1907	2537 L	1.25D+1.5L
2 - SPF	9.750"	43%	896 / 2170	3065 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5772 ft-lb	3'10 9/16"	11362 ft-lb	0.508 (51%)	1.25D+1.5L	L
Unbraced	5772 ft-lb	3'10 9/16"	5791 ft-lb	0.997 (100%)	1.25D+1.5L	L
Shear	2077 lb	11 1/8"	4638 lb	0.448 (45%)	1.25D+1.5L	L
Perm Defl in.	0.085 (L/1478)	4'10 1/8"	0.350 (L/360)	0.240 (24%)	D	Uniform
LL Defl inch	0.211 (L/597)	4'9 13/16"	0.350 (L/360)	0.600 (60%)	L	L
TL Defl inch	0.296 (L/425)	4'9 7/8"	0.524 (L/240)	0.560 (56%)	D+L	L

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top must be laterally braced at a maximum of 6'5 1/4" o.c.
- 4 Bottom braced at bearings.

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-10-12	0-2-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 3-10-10		Top	90 PLF	240 PLF	0 PLF	0 PLF	
3	Point	3-10-10		Far Face	251 lb	642 lb	0 lb	0 lb	F4
4	Tie-In	3-11-8 to 11-4-7	0-5-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	10-10-12 to 11-4-7	0-3-4 to 0-0-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	11-0-6		Top	292 lb			0 lb	F5 F5
7	Point	11-0-6		Top	11 lb			0 lb	

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

Handing & Installation

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

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Building Code	H. Authier	43236	2021-02-24
Seismic System			
Zoning			

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



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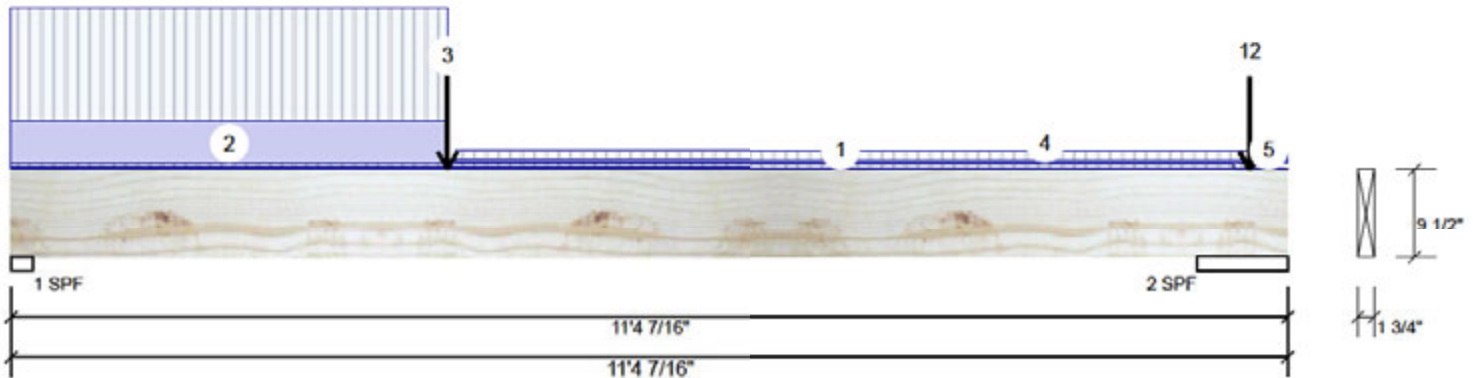


Client: GREENPARK
 Project: TRINAR HALL
 Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
 Input by: RCO
 Job Name: BRENTWOOD 1 (EL 3) DECK CONDITION
 Project #:

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

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Point	11-0-6		Top	12 lb	33 lb	0 lb	0 lb	
9	Point	11-0-6		Top	83 lb	222 lb	0 lb	0 lb	J8
10	Point	11-0-6		Top	15 lb	41 lb	0 lb	0 lb	J6
11	Point	11-0-6		Top	1 lb	2 lb	0 lb	0 lb	J7
12	Point	11-0-6		Top	75 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Self Weight				4 PLF				

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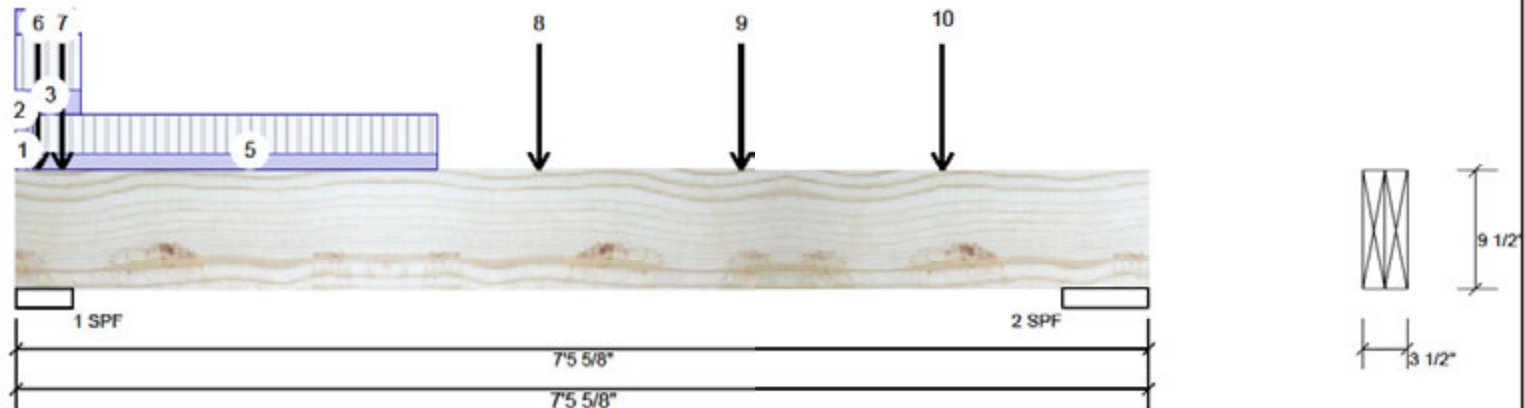


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Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
Input by: RCO
Job Name: BRENTWOOD 1 (EL 3) DECK CONDITION
Project #:

F8-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Piles:	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	1877	887	0	0
2	628	265	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF 4.500"	40%	1108 / 2815	3923 L	1.25D+1.5L
2 - SPF 6.875"	9%	331 / 941	1272 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2165 ft-lb	3'5 5/16"	22724 ft-lb	0.095 (10%)	1.25D+1.5L	L
Unbraced	2165 ft-lb	3'5 5/16"	21852 ft-lb	0.099 (10%)	1.25D+1.5L	L
Shear	1459 lb	6'2"	9277 lb	0.157 (16%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/9488)	3'7 5/8"	0.222 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.020 (L/3939)	3'7 5/8"	0.222 (L/360)	0.090 (9%)	L	L
TL Defl inch	0.029 (L/2784)	3'7 5/8"	0.332 (L/240)	0.090 (9%)	D+L	L

Design Notes

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-1-0		Top	38 PLF	90 PLF	0 PLF	0 PLF	J1
2	Part. Uniform	0-0-0 to 0-1-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-0 to 0-5-2		Top	76 PLF	179 PLF	0 PLF	0 PLF	J1
4	Part. Uniform	0-0-0 to 0-5-2		Top	80 PLF				Wall Self Weight
5	Part. Uniform	0-1-5 to 2-9-5		Near Face	48 PLF				

Continued on page 2...

Notes

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Lumber

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chemicals

Handling & Installation

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6. For flat roofs provide proper ponding

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Building Code	H. Authier	43236	2021-02-24
Seismic System			
Zoning			

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



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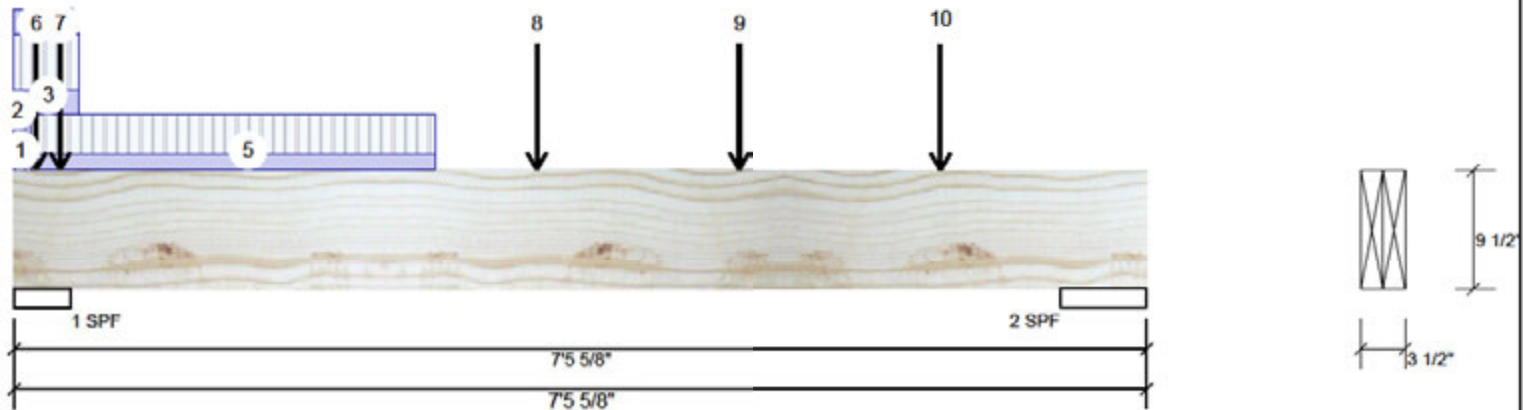


Client: GREENPARK
 Project: TRINAR HALL
 Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
 Input by: RCO
 Job Name: BRENTWOOD 1 (EL 3) DECK CONDITION
 Project #:

F8-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	0-1-12		Far Face	60 lb	75 lb	0 lb	0 lb	F5
7	Point	0-3-10		Top	513 lb	1158 lb	0 lb	0 lb	B4 B4
8	Point	3-5-5		Near Face	106 lb	276 lb	0 lb	0 lb	J6
9	Point	4-9-5		Near Face	109 lb	290 lb	0 lb	0 lb	J6
10	Point	6-1-5		Near Face	106 lb	280 lb	0 lb	0 lb	J6
	Self Weight				8 PLF				

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PASS THRU FRAMING SQUASH
 BLOCK IS REQUIRED AT ALL
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Notes

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Lumber

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This design is valid up to

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Seismic System			
Zoning			

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 L4A 7X4
 905-642-4400



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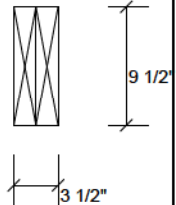
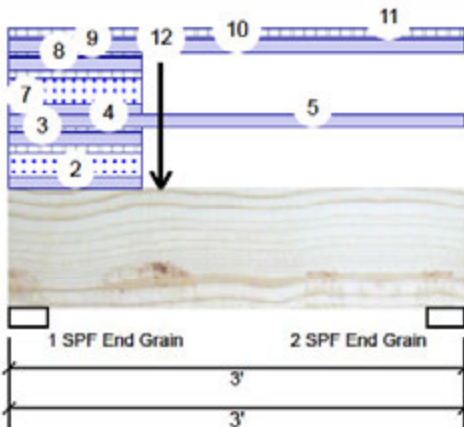


Client: GREENPARK
 Project:
 Address: TRINAR HALL
 EAST GWILLIMBURY, ON.

Date: 12/16/2020
 Input by: RCO
 Job Name: BRENTWOOD 1 (EL 3) DECK CONDITION
 Project #:

FH2-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Piles:	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	167	447	292	0
2	79	240	90	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	16%	559 / 605	1163 L	1.25D+1.5S +L
2 - SPF End Grain	3.000"	7%	300 / 209	509 L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	637 ft-lb	1'	21133 ft-lb	0.030 (3%)	1.25D+1.5S +L	L
Unbraced	637 ft-lb	1'	21133 ft-lb	0.030 (3%)	1.25D+1.5S +L	L
Shear	653 lb	11 3/4"	8627 lb	0.076 (8%)	1.25D+1.5S +L	L
Perm Defl in.	0.001 (L/23868)	1' 13/16"	0.088 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.001 (L/28938)	1'	0.088 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.002 (L/13145)	1' 7/16"	0.131 (L/240)	0.020 (2%)	D+S+0.5L	L

Design Notes

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
2	Part. Uniform	0-0-0 to 0-10-8		Top	34 PLF	24 PLF	78 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 0-10-8		Top	40 PLF				Wall Self Weight
4	Tapered Start	0-0-0		Top	4 PLF				

Continued on page 2...

Notes

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Lumber

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

chemicals

Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
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6. For flat roofs provide proper ponding

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Building Code	H. Authier	43236	2021-02-24
Seismic System			
Zoning			

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



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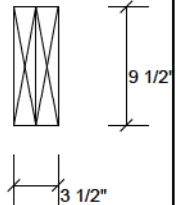
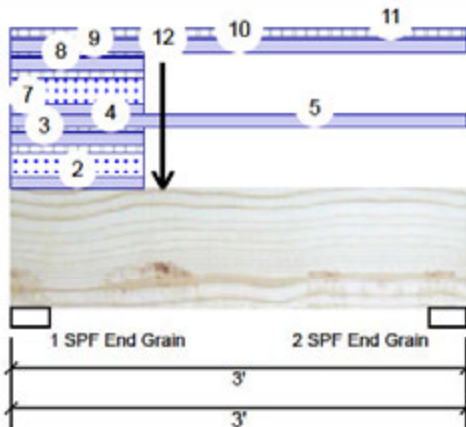


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 EAST GWILLIMBURY, ON.

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FH2-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	End	0-10-8			4 PLF	10 PLF	0 PLF	0 PLF	
5	Part. Uniform	0-0-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
7	Part. Uniform	0-0-0 to 0-10-8		Near Face	34 PLF	24 PLF	78 PLF	0 PLF	
8	Part. Uniform	0-0-0 to 0-10-8		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
9	Tapered Start	0-0-0		Near Face	4 PLF	10 PLF	0 PLF	0 PLF	
	End	0-10-8			4 PLF	10 PLF	0 PLF	0 PLF	
10	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
11	Tapered Start	0-0-0		Near Face	10 PLF	27 PLF	0 PLF	0 PLF	
	End	3-0-0			10 PLF	27 PLF	0 PLF	0 PLF	
12	Point	1-0-0		Top	258 lb	106 lb	245 lb	0 lb	Header Column Header Column
	Self Weight				8 PLF				

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 L4A 7X4
 905-642-4400



CSD | DRAW DESIGN BUILD

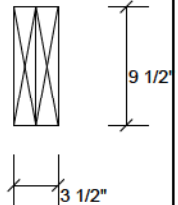
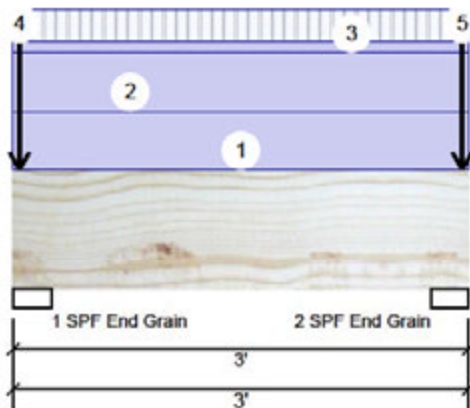


Client: GREENPARK
 Project: TRINAR HALL
 Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
 Input by: RCO
 Job Name: BRENTWOOD 1 (EL 3) DECK CONDITION
 Project #:

FH2-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	150	404	245	0
2	150	404	245	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	115 ft-lb	1'6"	14770 ft-lb	0.008 (1%)	1.4D	Uniform
Unbraced	115 ft-lb	1'6"	14770 ft-lb	0.008 (1%)	1.4D	Uniform
Shear	153 lb	2' 1/4"	7236 lb	0.021 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/64339)	1'6"	0.088 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		

Design Notes

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

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	16%	506 / 518	1023	L	1.25D+1.5S +L
2 - SPF End Grain	3.000"	16%	506 / 518	1023	L	1.25D+1.5S +L

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Tapered Start	0-0-0		Near Face	8 PLF	22 PLF	0 PLF	0 PLF	
	End	3-0-0			8 PLF				

Continued on page 2...



East Gwillimbury
 Building Standards Branch BCIN #15487

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 ponding

This design is valid for

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

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



CSD | DRAW DESIGN BUILD

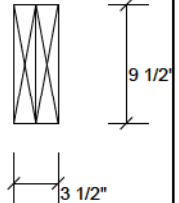
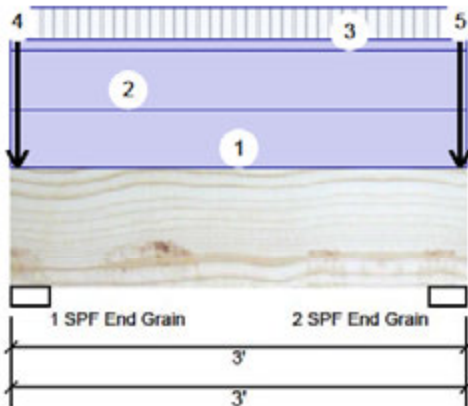


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 Project: TRINAR HALL
 Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
 Input by: RCO
 Job Name: BRENTWOOD 1 (EL 3) DECK CONDITION
 Project #:

FH2-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Point	0-0-8		Top	261 lb	117 lb	245 lb	0 lb	Header Column Header Column
5	Point	2-11-8		Top	261 lb	117 lb	245 lb	0 lb	Header Column Header Column
	Self Weight				8 PLF				

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Notes

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Lumber

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

Handling & Installation

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

6. For flat roofs provide proper ponding

This design is valid under

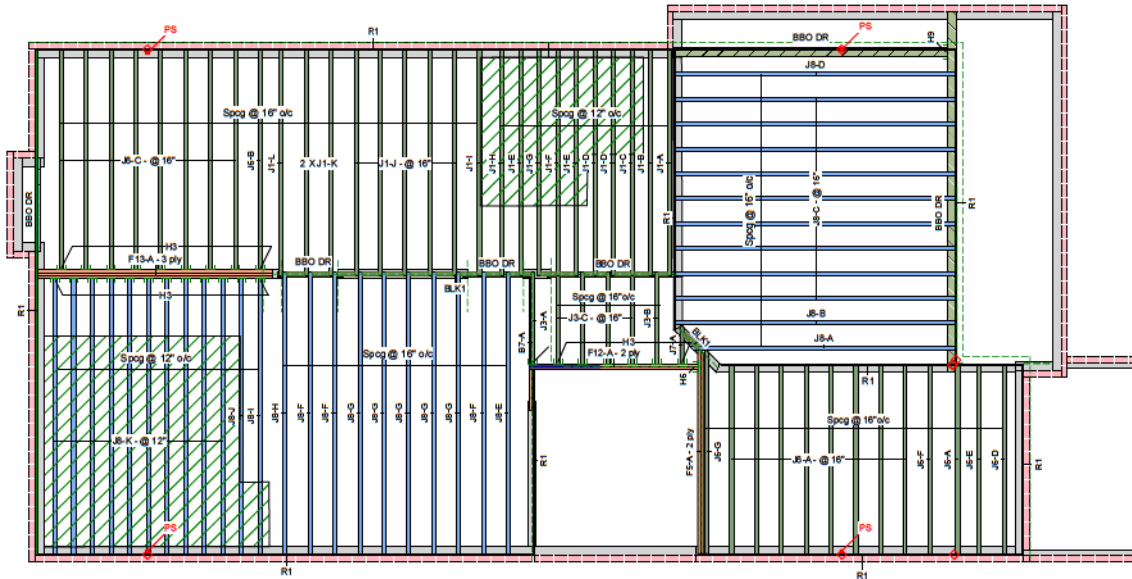
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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Seismic System			
Zoning			

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



CSD | DRAW DESIGN BUILD



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

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

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

Label	Description	Width	Depth	Qty	Piles	Pcs
F13	Forex 2.0E-3000Pb LVL	1.75	9.5	1	3	3
F5	Forex 2.0E-3000Pb LVL	1.75	9.5	1	2	2
F12	Forex 2.0E-3000Pb LVL	1.75	9.5	1	2	2

LVL/LSL (Dropped)						
Label	Description	Width	Depth	Qty	Piles	Pcs
B7	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2

Joist (Flush)						
Label	Description	Width	Depth	Qty	Piles	Pcs
J1	AJS 140	2.5	9.5			19
J6	AJS 140	2.5	9.5			22
J3	AJS 140	2.5	9.5			6
J7	AJS 140	2.5	9.5			1
J8	AJS 20	2.5	9.5			34

Blocking						
Label	Description	Width	Depth	Qty	Piles	Pcs
BLK1	AJS 140	2.5	9.5	LinPt		Varies







Rim Board						
Label	Description	Width	Depth	Qty	Plies	Pcs
R1	Norrbord Rimboard	1.125	9.5			16

	Plus 1.125 X 9.5					
Hanger					Beam/Girder	Sup

Label	Pcs	Description	Skew	Slope	fasteners	fast
	1	Unknown Hanger				
H3	27	LF259				
H6	1	HGUS4 10			46 16d	10
H9	1	Unknown Hanger				

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

Legend

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

JOB INFORMATION

Builder	GREENPARK
---------	-----------

Project
Shipping

TRINAR HALL
EAST GWILLIMBURY, ON.

Sales Rep
RM

Designer	RCO
----------	-----

Plotted
December 16, 2020

Layout Name
BRENTWOOD 1 (ELEV. 3)

Job Path
C:\Users\rochavillo\Documents\WORK FROM HOME
GREENPARK\TRINAR HALL\BRENTWOOD 1\LEV
3\FLOOR\BRENTWOOD 1 EL 3 ENGG\BRENTWOOD
1.sld

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/

LL Span 1/	360
TL Span 1/	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

Decking	OSB
Thickness	5/8"
Fastener	Nailed & Glued
Vibration	

CCMC References

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

<p>Kott Lumber Company 14 Anderson Blvd Stouffville, Ontario Canada L4A 7X4 905-642-4400</p>	
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Hatch Area represents where additional load has been applied.
(e.g. 5 psf for ceramic tile)

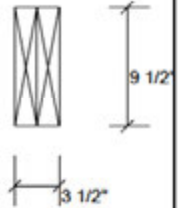
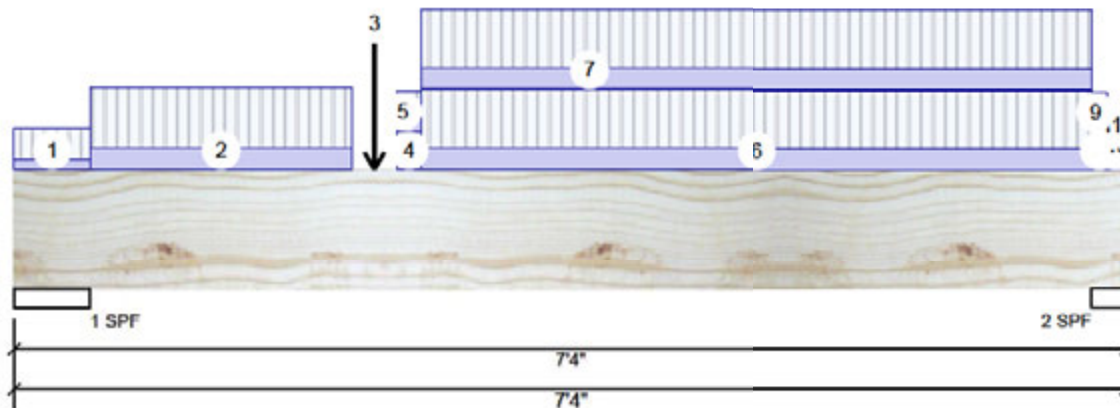


Client: GREENPARK
Project: TRINAR HALL
Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
Input by: RCO
Job Name: BRENTWOOD 1 (ELEV. 3)
Project #:

B7-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Ply:	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	909	392	0	0
2	484	217	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	6.000"	14% 490 / 1363	1853 L	1.25D+1.5L
2 - SPF	2.750"	17% 271 / 725	997 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3439 ft-lb	2'4 1/2"	22724 ft-lb	0.151 (15%)	1.25D+1.5L	L
Unbraced	3439 ft-lb	2'4 1/2"	21830 ft-lb	0.158 (16%)	1.25D+1.5L	L
Shear	1788 lb	1'2 3/4"	9277 lb	0.193 (19%)	1.25D+1.5L	L
Perm Defl in.	0.012 (L/6787)	3'4 5/16"	0.224 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.028 (L/2912)	3'4"	0.224 (L/360)	0.120 (12%)	L	
TL Defl inch	0.040 (L/2038)	3'4 1/16"	0.336 (L/240)	0.120 (12%)	D+L	L

Design Notes

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

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tapered Start	0-0-0		Top	5 PLF	14 PLF	0 PLF	0 PLF	
	End	0-6-0			5 PLF	14 PLF	0 PLF	0 PLF	
2	Tapered Start	0-6-0		Top	10 PLF	28 PLF	0 PLF	0 PLF	
	End	2-2-12			10 PLF	28 PLF	0 PLF	0 PLF	
3	Point	2-4-8		Top	442 lb	1090 lb	0 lb	0 lb	F12
4	Tapered Start	2-6-4		Top	5 PLF				
	End	2-8-4			5 PLF				

Continued on page 2...

Notes

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Lumber

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

Handling & Installation

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

6. For flat roofs provide proper ponding

This design is valid only

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Building Code	H. Authier	43236	2021-02-24
Seismic System			
Zoning			

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CSD | DRAW DESIGN BUILD

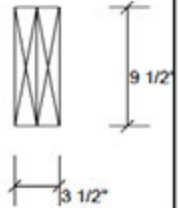
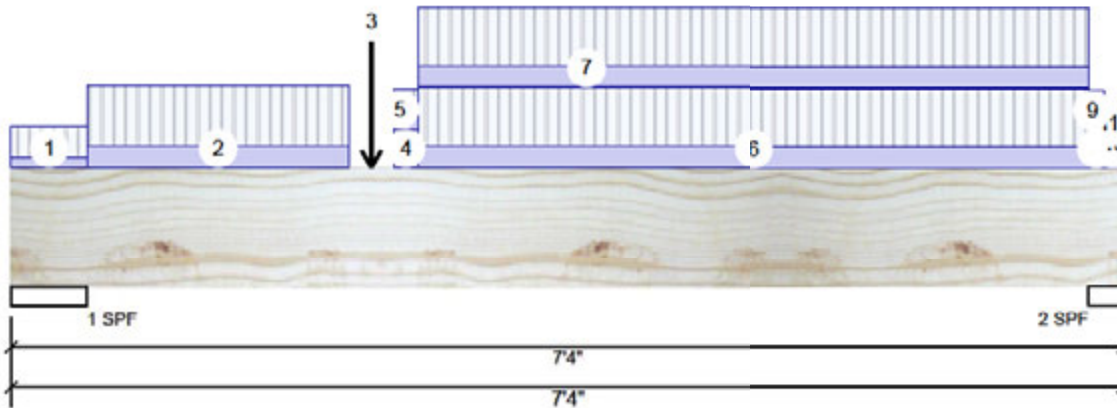


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 Project #:

B7-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
5	Tapered Start	2-6-4		Top	5 PLF	13 PLF	0 PLF	0 PLF	
	End	2-8-4			5 PLF	13 PLF	0 PLF	0 PLF	
6	Tapered Start	2-8-4		Top	10 PLF	27 PLF	0 PLF	0 PLF	
	End	7-1-4			10 PLF	27 PLF	0 PLF	0 PLF	
7	Tapered Start	2-8-4		Top	10 PLF	27 PLF	0 PLF	0 PLF	
	End	7-1-4			10 PLF	27 PLF	0 PLF	0 PLF	
8	Tapered Start	7-1-4		Top	5 PLF	13 PLF	0 PLF	0 PLF	
	End	7-2-8			5 PLF	13 PLF	0 PLF	0 PLF	
9	Tapered Start	7-1-4		Top	5 PLF	13 PLF	0 PLF	0 PLF	
	End	7-2-8			5 PLF	13 PLF	0 PLF	0 PLF	
10	Tapered Start	7-2-8		Top	3 PLF	7 PLF	0 PLF	0 PLF	
	End	7-4-0			3 PLF	7 PLF	0 PLF	0 PLF	
11	Tapered Start	7-2-8		Top	1 PLF	3 PLF	0 PLF	0 PLF	
	End	7-4-0			1 PLF	3 PLF	0 PLF	0 PLF	
	Self Weight				8 PLF				

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East Gwillimbury
 Building Standards Branch BCN #15487

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
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Zoning			

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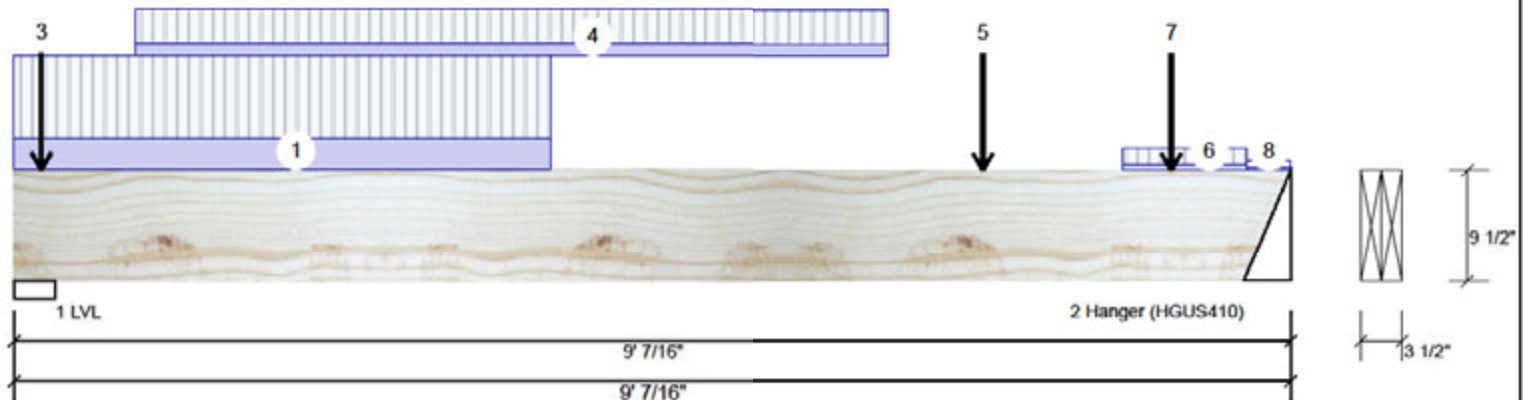
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Member Information

Type:	Girder	Application:	Floor (Residential)
Piles:	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	1090	442	0	0
2	565	246	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - LVL	3.500"	24% 553 / 1635	2188 L	1.25D+1.5L
2 - Hanger	4.000"	11% 307 / 848	1155 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3526 ft-lb	3'5 13/16"	22724 ft-lb	0.155 (16%)	1.25D+1.5L	L
Unbraced	3526 ft-lb	3'5 13/16"	21284 ft-lb	0.166 (17%)	1.25D+1.5L	L
Shear	1657 lb	1' 1/4"	9277 lb	0.179 (18%)	1.25D+1.5L	L
Perm Defl in.	0.021 (L/4951)	4'2 3/4"	0.285 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.050 (L/2052)	4'2 3/8"	0.285 (L/360)	0.180 (18%)	L	
TL Defl inch	0.071 (L/1451)	4'2 1/2"	0.427 (L/240)	0.170 (17%)	D+L	L

Design Notes

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

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-9-8		Top	90 PLF	240 PLF	0 PLF	0 PLF	
2	Point	0-2-5		Top	1 lb	2 lb	0 lb	0 lb	
3	Point	0-2-5		Top	1 lb	2 lb	0 lb	0 lb	
4	Part. Uniform	0-10-5 to 6-2-5		Far Face	36 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

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 ponding

This design is valid until

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

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



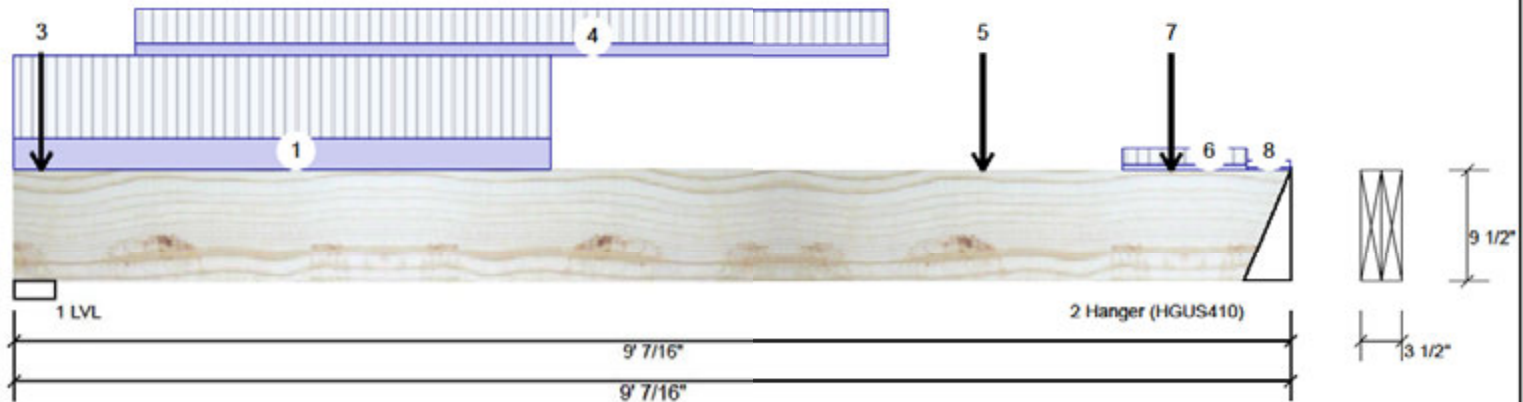
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Client: GREENPARK
 Project: TRINAR HALL
 Address: EAST GWILLIMBURY, ON.

Date: 12/16/2020
 Input by: RCO
 Job Name: BRENTWOOD 1 (ELEV. 3)
 Project #:

F12-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
5	Point	6-10-5		Far Face	51 lb	144 lb	0 lb	0 lb	J3
6	Tie-In	7-10-2 to 8-8-12	1-2-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Point	8-2-5		Far Face	12 lb	32 lb	0 lb	0 lb	J7
8	Tie-In	8-8-12 to 9-0-7	0-6-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				8 PLF				

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

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

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



Notes

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Lumber

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Handling & Installation

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6. For flat roofs provide proper ponding

This design is valid up to

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Job Name: BRENTWOOD 1 (ELEV. 3)
Project #:

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



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	2978	1292	0	0
2	3312	1405	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	4.375"	43% 1615 / 4467	6082 L	1.25D+1.5L
2 - SPF	6.000"	35% 1756 / 4968	6724 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	18683 ft-lb	6'2 3/4"	35449 ft-lb	0.527 (53%)	1.25D+1.5L	L
Unbraced	18683 ft-lb	6'2 3/4"	35449 ft-lb	0.527 (53%)	1.25D+1.5L	L
Shear	7303 lb	11'4 1/2"	13915 lb	0.525 (52%)	1.25D+1.5L	L
Perm Defl in.	0.142 (L/999)	6'2 13/16"	0.395 (L/360)	0.360 (36%)	D	Uniform
LL Defl inch	0.331 (L/431)	6'2 13/16"	0.395 (L/360)	0.840 (84%)	L	
TL Defl inch	0.473 (L/301)	6'2 13/16"	0.593 (L/240)	0.800 (80%)	D+L	L

Design Notes

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-5-7 to 10-5-7		Near Face	127 PLF	291 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-7-7 to 11-3-7		Far Face	87 PLF	231 PLF	0 PLF	0 PLF	
3	Point	10-11-7		Near Face	113 lb	291 lb	0 lb	0 lb	J8
4	Point	11-11-7		Far Face	107 lb	285 lb	0 lb	0 lb	J6
5	Point	11-11-7		Near Face	129 lb	340 lb	0 lb	0 lb	J8
	Self Weight				11 PLF				



Notes

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Lumber

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

Handling & Installation

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

6. For flat roofs provide proper ponding

This design is valid only

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Building Code	H. Authier	43236	2021-02-24
Seismic System			
Zoning			

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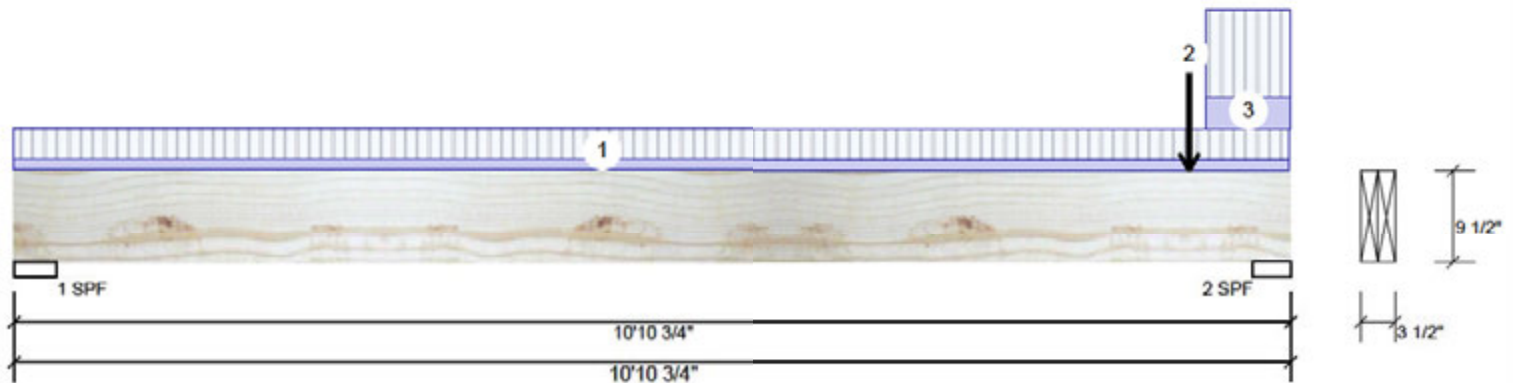


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Level: Second Floor



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	71	70	0	0
2	583	292	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.375"	2%	88 / 106	194	L	1.25D+1.5L
2 - SPF	3.889"	15%	365 / 874	1240	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	759 ft-lb	8'5 3/16"	22724 ft-lb	0.033 (3%)	1.25D+1.5L	L
Unbraced	759 ft-lb	8'5 3/16"	20615 ft-lb	0.037 (4%)	1.25D+1.5L	L
Shear	1187 lb	9'10 1/8"	9277 lb	0.128 (13%)	1.25D+1.5L	L
Perm Defl in. (L/13141)	0.009	5'9 13/16"	0.344 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.013 (L/9906)	6'1 5/16"	0.344 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.022 (L/5653)	5'11 13/16"	0.517 (L/240)	0.040 (4%)	D+L	L

Design Notes

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- Top loads must be supported equally by all plies.
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-10-9	0-2-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	10-0-6		Far Face	245 lb	565 lb	0 lb	0 lb	F12
3	Tie-In	10-2-2 to 10-10-12	0-5-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				8 PLF				



East Gwillimbury
Building Standards Branch BCIN #15487

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