Engineering Note Page (ENP-2)

REVISION 2009-10-09

19-440065-000.00 ft

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 <u>only</u> 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 NASCOR 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 squash blocks. Structural elements such as walls, posts, connectors, and squash 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 NASCOR joists is to be carried out in accordance with the current edition of the manufacturer's approved literature available at http://www.nascor.ca.

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 squash block framing is required at all point loads over bearings.

HANDLING AND INSTALLATION

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



Client:

Address:

GREENPARK

Project:

Date:

8/13/2018

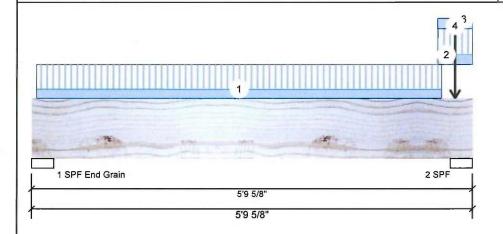
Designer: RCO

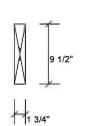
HEMLOCK 3-1 Job Name:

Project #:

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

Level: Ground Floor





Page 1 of 1

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

Brg	Live	Dead	Snow	Wind
1	548	216	0	0
2	573	495	435	0

Unfactored Reactions UNPATTERNED Ib (Uplift)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1375 ft-lb	2'10 7/8"	11362 ft-lb	0.121 (12%)	1.25D+1.5L	L
Unbraced	1375 ft-lb	2'10 7/8"	6976 ft-lb	0.197 (20%)	1.25D+1.5L	L
Shear	1022 lb	4'9 3/8"	4638 lb	0.220 (22%)	1.25D+1.5L	L
Perm Defl in.	0.007 (L/8569)	2'10 7/8"	0.178 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.019 (L/3380)	2'10 13/16"	0.178 (L/360)	0.110 (11%)	L+0.5S	L
TI Deflinch	0.026 (1./2424)	2'10 13/16"	0.267 (1/240)	0.100 (10%)	D+I +0.5S	i.

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF End Grain	3,500"	24%	270 / 822	1092	L	1.25D+1.5L	
2 - SPF	3.500"	45%	619 / 1077	1696	L	1.25D+1.5L +0.5S	

Wind

0 PLF

0 PLF

0 PLF

J4

Design Notes

- 3 Top braced at bearings.
- 4 Bottom braced at bearings.

Load Type

Part. Uniform

Part, Uniform

Part, Uniform

Self Weight

Point

ı	Performed Secondary	Bearing Check	(CSA 086-14	6.5.7.3). Ass	umed point load	size: bean	Π
	width X 4.5.	-	•				

0-0-12 to 5-4-12

5-4-2 to 5-9-10

5-4-2 to 5-9-10 5-6-14

Location

Trib Width

2 Girders are designed to be supported on the bottom edge only.

Side Dead Live Snow 72 PLF 193 PLF 0 PLF Near Face 75 PLF 200 PLF 0 PLF Top Тор 80 PLF 0 PLF 0 PLF 234 lb 0 lb 435 lb Top 4 PLF



August 17, 2018

0 lb F14 F14 F14 F14 Pass-Thru Framing Squash Block is required at all point loads over bearings

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

Wall Self Weight

ID

1

2

3

4

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

Lumber

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

chemicals

Handling & Installation

- Andling & 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 adge is laterally restrained
 Provide lateral support at beamg points to avoid
 lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This desi

Manufacturer Info Forex APA: PR-L318

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





Client: Project:

Address:

GREENPARK

Brg

1

8/13/2018

RCO

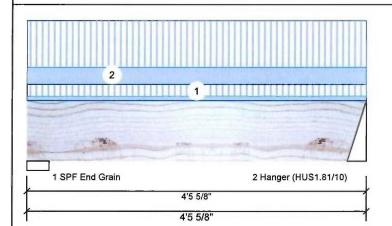
Designer: Job Name: HEMLOCK 3-1

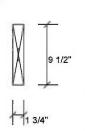
Project #:

Date:

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

Level: Ground Floor





Wind

Page 1 of 1

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

2	179	76	0	0	

Snow

Unfactored Reactions UNPATTERNED Ib (Uplift)

Dead

77

Live

183

Bearings and Factored Reactions

Analysis Results Analysis Actual Location Allowed Capacity Comb. Moment 337 ft-lb 2'3 1/16" 11362 ft-lb 0.030 (3%) 1.25D+1.5L L 337 ft-lb 2'3 1/16" 8769 ft-lb Unbraced 0.038 (4%) 1.25D+1.5L L Shear 203 lb 1' 1/4" 4638 lb 0.044 (4%) 1,25D+1.5L L Perm Defl in. 0.001 2'3 1/16" 0.135 (L/360) 0.010 (1%) D Uniform (L/36948) LL Defl inch 0.003 2'3 1/16" 0.135 (L/360) 0.020 (2%) L (L/15591) TL Defl inch 0.004 2'3 1/16" 0.203 (L/240) 0.020 (2%) D+L (L/10965)

Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 1-SPF 3.500" 8% 96 / 274 1.25D+1.5L End Grain

3.000" 9% 95 / 269 364 L 1.25D+1.5L Hanger T.L. WISE



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

4 Bottom braced at bearings.



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-5-10	(Span)0-9-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 4-5-10	(Span)3-2-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 PLF				

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

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

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

Lumber

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

chemicals

Handling & Installation

LVL beams must not be cut or drilled Refer to manufacturer's product informatior regarding installation requirements, multi-ply fastening details, beam strength values, and code

approvals

Damaged Beams must not be used

Design assumes top adge is laterally restrained

Provide lateral support at bearing points to avoid

lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This desi

Manufacturer Info Forex APA: PR-L318

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

100083566



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Client:

GREENPARK

Project: Address:

Date: 8/13/2018

Designer: RCO

Job Name: HEMLOCK 3-1

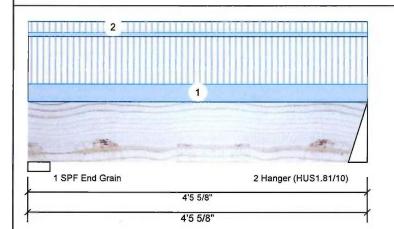
Project #:

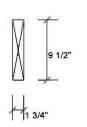
Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED

Brg

1 2 Level: Ground Floor





Wind

0

0

Page 1 of 1

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

Bearings	and	Factored	Reactions

Live

198

195

Unfactored Reactions UNPATTERNED Ib (Uplift)

Dead

83

81

Snow

0

0

Dearing	Janua i uc	Corca	Cacaons			
Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	9%	104 / 298	401	L	1.25D+1.5L
2 - Hanger	3.000"	10%	102 / 292	394	L	1.25D+1.5L

Analysis Results Analysis Actual Location Allowed Capacity Comb. Moment 365 ft-lb 2'3 1/16" 11362 ft-lb 0.032 (3%) 1.25D+1.5L L 365 ft-lb Unbraced 2'3 1/16" 8769 ft-lb 0.042 (4%) 1.25D+1.5L L Shear 220 lb 1' 1/4" 4638 lb 0.047 (5%) 1.25D+1.5L L Perm Defl in. 0.001 2'3 1/16" 0.135 (L/360) 0.010 (1%) D Uniform (L/34346) 0.003 LL Defl inch 2'3 1/16" 0.135 (L/360) 0.030 (3%) L (L/14366)

2'3 1/16" 0.203 (L/240) 0.020 (2%) D+L

Design Notes

TL Defl inch 0.005

1 Fill all hanger nailing holes.

(L/10129)

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

4 Bottom braced at bearings.



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-5-10	(Span)3-6-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 4-5-10	(Span)0-9-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
1	Self Weight				4 PLF				

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

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

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design critoria 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-pit fastening details, beam strength values, and code approveds.
- approvals

 Damaged Beams must not be used
 Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This desi

Manufacturer Info

Forex APA: PR-L318

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Client:

Project: Address: **GREENPARK**

Date:

8/13/2018

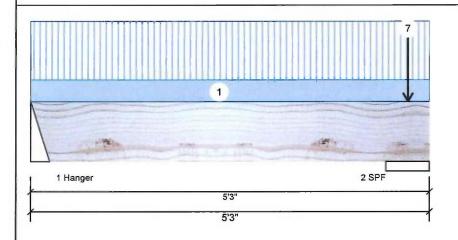
RCO

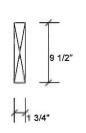
Designer: Job Name: HEMLOCK 3-1

Project #:

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

Level: Ground Floor





Page 1 of 2

Member Inform	nation		
Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance;	Normal	Vibration:	Not Checked
General Load		6	
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED Ib (Uplift)						
Brg	Live	Dead	Snow	Wind		
1	37	23	0	0		
2	101	551	678	0		
Danwing	a and Fastana	d Decetions				

Analysis Results							
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case	
Moment	89 ft-lb	2'5 9/16"	7840 ft-lb	0.011 (1%)	1.25D+1.5L	L	
Unbraced	89 ft-lb	2'5 9/16"	6764 ft-lb	0.013 (1%)	1.25D+1.5L	L	
Shear	51 lb	11 3/4"	3200 lb	0.016 (2%)	1.25D+1.5L	L	
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)			
LL Defl inch	0.001 (L/64425)	2'5 9/16"	0.152 (᠘/360)	0.010 (1%)	L+0.5S	L	
TL Defl inch	0.001	2'5 9/16"	0.228 (L/240)	0.010 (1%)	D+L+0.5S	L	

Bearings and Factored Reactions Cap. React D/L lb Total Ld. Case Ld. Comb. Bearing Length 3% 29 / 55 84 L 1.25D+1.5L 3.000" 1 -Hanger 2 - SPF 6.875" 40% 689 / 1067 1756 L 1.25D+1.5S

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top braced at bearings.



+0.5L

5 Bottom	braced at bearings.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 5-3-0	(Span)0-9-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	4-11-10		Тор	435 lb	dI 0	658 lb	0 lb	F15 F15
3	Point	4-11-10		Тор	2 lb	0 lb	6 lb	0 lb	
4	Point	4-11-10		Тор	6 lb	0 lb	14 lb	0 lb	
5	Point	4-11-10		Тор	30 lb	0 lb	0 lb	0 lb	Wall Self Weight
ontinued or	page 2								

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

Lumber

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

chemicals

Handling & Installation

LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code

approvals
Damaged Beams must not be used
Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This desi

Manufacturer Info Forex

APA: PR-L318

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





Client: Project:

Address:

GREENPARK

Date:

8/13/2018

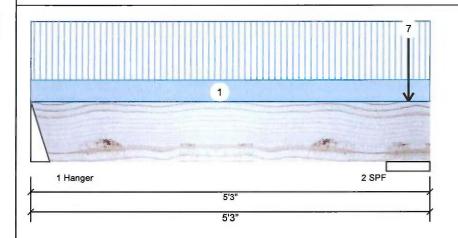
Designer: RCO

HEMLOCK 3-1

Job Name: Project #:

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

Level: Ground Floor



Page 2 of 2

..Continued from page 1

ID	Load Type
6	Point
7	Point





Comments 0 lb J7 Wall Self Weight 0 lb

4 PLF Self Weight

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

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

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

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
- approvals
 Damaged Beams must not be used
 Design assumes too edge is laterally restrained
 Provide Tateral support at bearing points to avoid
 lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Forex APA: PR-L318

Manufacturer Info



Page 1 of 1 Client GREENPARK Date: 8/13/2018 Project: Designer: RCO isDesign™ Address: Job Name: HEMLOCK 3-1 Project # 1.750" X 9.500" - PASSED Level: Ground Floor Forex 2.0E-3000Fb LVL 1 1 SPF End Grain 8 1/8" **Unfactored Reactions UNPATTERNED Ib (Uplift)** Member Information Type: Girder Floor (Residential) Live Dead Snow Wind Application: Brg Plies: LSD Design Method: 0 25 11 0 NBCC 2010 / OBC 2012 Moisture Condition: Dry **Building Code:** 2 25 0 0 Deflection LL: 360 Load Sharing: No Deflection TL: Not Checked 240 Deck: Importance: Normal Vibration: Not Checked General Load **Bearings and Factored Reactions** Floor Live: 40 PSF Dead: 15 PSF Grain **Analysis Results** 51 L 2 - SPF 1.750" 2% 13 / 37

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case	
Moment	5 ft-lb	4 1/16"	11362 ft-lb	0.000 (0%)	1.25D+1.5L	L	
Unbraced	5 ft-lb	4 1/16"	11362 ft-lb	0.000 (0%)	1.25D+1.5L	L	
Shear	40 lb	-(2 3/8")	4638 lb	0.009 (1%)	1.25D+1.5L	L	
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)			
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)			
TL Defl inch	0.000 (L/999)	0	999,000 (L/0)	0.000 (0%)			

Design Notes

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

3 DOLLOTT	i bi aceu at bealligs.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind
1	Tie-In	0-0-0 to 0-8-2	(Span)3-8-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF
	Self Weight				4 PLF			

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

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

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

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

chemicals

Handling & Installation

LVL beams must not be out or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastering details, beam strength values, and code

Damaged Beams must not be used Design assumes top edge is laterally restrained

Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

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

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



Version 18.40.162 Powered by iStruct™

Bearing Length	Cap. Re	act D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF 1.750" End	2%	13 / 37	51	L	1.25D+1.5L	

End

Grain

1.25D+1.5L

T.L. WISE 100083566 100083566

NCE OF ON August 17, 2018

Client:

GREENPARK

Project: Address:

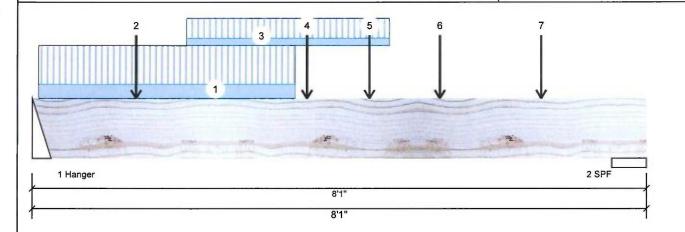
8/13/2018 Date:

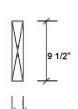
RCO Designer:

Job Name: HEMLOCK 3-1

Project #

1.750" X 9.500" - PASSED Level: Ground Floor Forex 2.0E-3000Fb LVL





Wind

0

0

Page 1 of 1

Membe	r Informatio	on
-------	--------------	----

Type: Girder Plies: Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal

Floor Live: 40 PSF Dead: 15 PSF

Application: Design Method:

Building Code:

Load Sharing: Not Checked Deck:

Vibration:

NBCC 2010 / OBC 2012 No

Not Checked

LSD

Floor (Residential)

Live

1339

1160

1

2

Bearings and Factored Reactions

Unfactored Reactions UNPATTERNED Ib (Uplift)

Dead

525

459

Snow

0

0

Cap. React D/L lb Total Ld. Case Ld. Comb. Bearing Length 68% 656 / 2008 2664 L 1.25D+1.5L 3.000" Hanger 2 - SPF 5.500" 39% 574 / 1741 2315 L 1.25D+1.5L

Analysis Results

General Load

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5089 ft-lb	3'7 3/8"	11362 ft-lb	0.448 (45%)	1.25D+1.5L	L
Unbraced	5089 ft-lb	3'7 3/8"	5098 ft-lb	0.998 (100%)	1.25D+1.5L	L
Shear	2309 lb	6'10 3/4"	4638 lb	0.498 (50%)	1.25D+1.5L	L
Perm Defl in.	0.047 (L/1899)	3'10 3/4"	0.250 (L/360)	0.190 (19%)	D	Uniform
LL Defl inch	0.120 (L/751)	3'10 5/8"	0.250 (L/360)	0.480 (48%)	L	L
TL Defl inch	0.167 (L/538)	3'10 5/8"	0.375 (L/240)	0.450 (45%)	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 must be laterally braced at a maximum of 7'3 3/4" o.c.

4 Bottom braced at bearings.



August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	
1	Part. Uniform	0-1-0 to 3-5-8		Тор	90 PLF	240 PLF	0 PLF	
2	Point	1-4-6		Far Face	65 lb	174 lb	0 lb	
3	Part, Uniform	2-0-6 to 4-8-6		Far Face	46 PLF	123 PLF	0 PLF	
4	Point	3-7-6		Near Face	81 lb	195 lb	0 lb	_
5	Point	4-5-4		Near Face	76 lb	179 lb	0 lb	P: re
6	Point	5-4-6		Far Face	155 lb	413 lb	0 lb	10
7	Point	6-8-6		Far Face	150 lb	400 lb	0 lb	R
	Self Weight				4 PLF			D

0 lb F2 Pass-Thru Framing Squash Block is required at all point loads over bearings

Comments

Wind 0 PLF 0 lb J2

0 PLF

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

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

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

Damaged Beams must not be used
Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

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



Client:

GREENPARK

Project: Address:

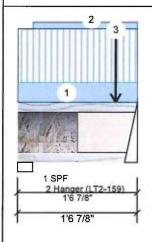
8/13/2018

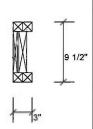
RCO Designer: Job Name: HEMLOCK 3-1

Project #:

2-Ply - PASSED NJ 9.500"

Level: Ground Floor





Page 1 of 1

	ber :			

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

Application: Design Method:

Floor (Residential) LSD

NBCC 2010 / OBC 2012

Building Code: Load Sharing:

Deck:

No **Not Checked** Not Checked

Vibration:

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind
1	71	34	0	0
2	172	85	0	0

Bearings and Factored Reactions

Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF	2.375"	6%	42 / 107	149	L	1.25D+1.5L	
2 - Hanger	2.000"	14%	106 / 258	363	L	1.25D+1.5L	

Analysis Results

ı	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	64 ft-lb	1'1 3/16"	7340 ft-lb	0.009 (1%)	1.25D+1.5L	L
	Unbraced	64 ft-lb	1'1 3/16"	6912 ft-lb	0.009 (1%)	1.25D+1.5L	L
l	Shear	349 lb	1'5 5/8"	3080 lb	0.113 (11%)	1.25D+1.5L	L
l	Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
	LL Defl inch	0.000 (L/45568)	1' 5/8"	0.044 (L/360)	0.010 (1%)	L	L
	TL Defl inch	0.001 (L/30524)	1' 9/16"	0.067 (L/240)	0.010 (1%)	D+L	L

Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.

	64 ft-lb	1'1 3/16"	7340 ft-lb	0.009 (1%)	1.25D+1.5L	L
1	64 ft-lb	1'1 3/16"	6912 ft-lb	0.009 (1%)	1.25D+1.5L	L
	349 lb	1'5 5/8"	3080 lb	0.113 (11%)	1.25D+1.5L	L
l in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
ch	0.000 (L/45568)	1' 5/8"	0.044 (L/360)	0.010 (1%)	L	L
ch	0.001 (L/30524)	1' 9/16"	0.067 (L/240)	0.010 (1%)	D+L	L



August 17, 2018

6 Bottom	flange braced at bearings							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	
1	Tie-In	0-0-0 to 1-6-14	(Span)3-3-0	Тор	15 PSF	40 PSF	0 PSF	
2	Part. Uniform	0-2-6 to 1-6-14		Тор	8 PLF	0 PLF	0 PLF	
3	Point	1-3-7		Near Face	69 lb	141 lb	0 lb	

Wind Comments 0 PSF

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

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

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

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

Handling & Installation

- Andling & Installation

 Lolist flanges must not be cut or drilled
 Refer to latest copy of the Lloist product information
 details for framing details, stifferent rables, web hole
 chart, bridging details, multi-ply fastening details and
 handling/erection details
 Damaged Lloists must not be used
 Design assumes top flange to be laterally restrained
 by attached sheathing or as specified in engineering
 notes.

- Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT

CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Manufacturer Info

Nascor by Kott

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



This design



Client:

GREENPARK

Project: Address: Date:

8/13/2018

Page 1 of 1

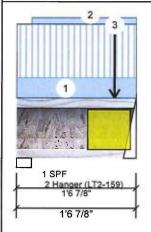
Designer: RCO

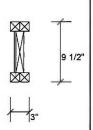
Job Name: HEMLOCK 3-1

Project #:

2-Ply - PASSED NJ 9.500"

Level: Ground Floor





B #		T-4			-:-	-
Mem	per	INT	Orn	nai	tio	п

Girder Type: Plies: 2 Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal General Load

40 PSF

15 PSF

Application: Design Method: **Building Code:**

Load Sharing:

Floor (Residential) LSD

NBCC 2010 / OBC 2012

No

Deck: Not Checked Vibration: Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	vvina
1	60	28	0	0
2	98	48	0	0
1				

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF	2.375"	5%	35 / 90	125	L	1.25D+1.5L	
2 - Hanger	2.000"	8%	60 / 148	208	L	1.25D+1.5L	

Analysis Results

Floor Live:

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	42 ft-lb	11"	7340 ft-lb	0.006 (1%)	1.25D+1.5L	L
Unbraced	42 ft-lb	11"	6912 ft-lb	0.006 (1%)	1.25D+1.5L	L
Shear	194 lb	1'5 5/8"	3080 lb	0.063 (6%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (∐67719)	10 7/8"	0.044 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.000 (L/45357)	10 7/8"	0.067 (L/240)	0.010 (1%)	D+L	L

Design Notes

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

ent	42 ft-lb	11"	7340 ft-lb	0.006 (1%)	1.25D+1.5L	L
aced	42 ft-lb	11"	6912 ft-lb	0.006 (1%)	1.25D+1.5L	L
ır	194 lb	1'5 5/8"	3080 lb	0.063 (6%)	1.25D+1.5L	L
Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
efl inch	0.000 (L/67719)	10 7/8"	0.044 (L/360)	0.010 (1%)	L	L
efl inch	0.000 (L/45357)	10 7/8"	0.067 (L/240)	0.010 (1%)	D+L	L





ID Load Type Location Trib Width Side Dead Live Snow 0-0-0 to 1-6-14 (Span)3-3-0 Top 15 PSF 40 PSF 0 PSF Part. Uniform 0-2-6 to 1-6-14 8 PLF 0 PLF 0 PLF 2 Top 3 Point 1-3-7 Far Face 27 lb 56 lb 0 lb

Comments

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

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

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

Dry service conditions—unless noted otherwise
 Upist not to be treated with fire retardant or corrosive

Handling & Installation

- Libria Maria Santalatura Libria Santalatura Libria Santalatura Libria Santalatura Libria Santalatura S

- Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing length>= 3,5 inches
 For flat roofs

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

IN THE DESIGN OF THIS COMPONENT. This design

Manufacturer Info

Nascor by Kott





Client:

Address:

GREENPARK

Project:

Date:

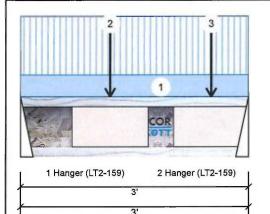
8/13/2018

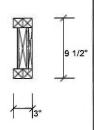
Designer: RCO Job Name: HEMLOCK 3-1

Project #

NJ 9.500" 2-Ply - PASSED

Level: Ground Floor





Page 1 of 1

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

Brg	Live	Dead	Snow	Wind	
1	295	111	0	0	
2	398	149	0	0	

Analysis Results Analysis Actual Location Allowed Capacity Comb. 576 ft-lb 1'2 1/8" 7340 ft-lb 0.078 (8%) 1.25D+1.5L L Moment Unbraced 576 ft-lb 1'2 1/8" 4678 ft-lb 0.123 (12%) 1.25D+1.5L L Shear 776 lb 2'10 3/4" 3080 lb 0.252 (25%) 1.25D+1.5L L 1'2 1/8" 0.093 (L/360) 0.020 (2%) D Perm Defl in. 0.002 Uniform (L/20392)LL Defl inch 0.004 (L/7661) 1'2 1/8" 0.093 (L/360) 0.050 (5%) L TL Defl inch 0.006 (L/5569) 1'2 1/8" 0.140 (L/240) 0.040 (4%) D+L

Bearings and Factored Reactions

Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	22%	138 / 442	581	L	1.25D+1.5L
2 - Hanger	2.000"	30%	187 / 597	783	L	1.25D+1.5L

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.

5 Top fla	ids must be supported equinge braced at bearings.	5 5 5					
6 Bottom	flange braced at bearings Load Type	Location	Trib Width	Side	Dead	Live	Snow
1	Tie-In	0-0-0 to 3-0-0	(Span)1-8-15	Тор	15 PSF	40 PSF	0 PSF
2	Point	1_2_2		Far Face	127 lb	338 lh	0 lb



August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-0-0	(Span)1-8-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-2-2		Far Face	127 lb	338 lb	0 lb	0 lb	J5
3	Point	2-6-2		Far Face	94 lb	250 lb	0 lb		ru Framing Squash Block is at all point loads over bearings

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

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

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

Handling & Installation

- Andling & Installation

 . Most flanges must not be cut or drilled
 . Refer to latest copy of the Lloist product information
 details for framing details, stiffener tables, web hole
 chart, bridging details, multi-ply fastening details and
 handling/erection details
 . Damaged bloists must not be used
 . Design assumes top flange to be laterally restrained
 by attached sheathing or as specified in engineering
 notes.

This design

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3,5 inches
7. For flat roofs

READ ALL NOTES ON THIS PAGE AND ON THE

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

Manufacturer Info

Nascor by Kott

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



Version 18.40.162 Powered by iStruct™

Client:

Address:

GREENPARK

Project:

Date:

8/13/2018

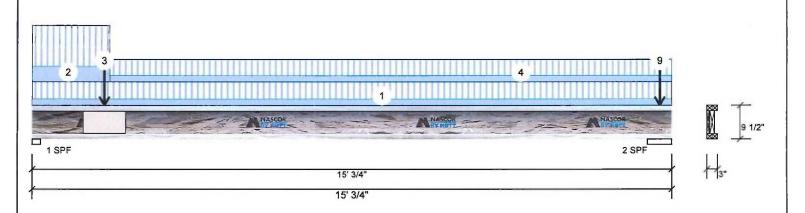
Designer: RCO

Job Name: Project #:

2-Ply - PASSED NJ 9.500"

Level: Ground Floor

HEMLOCK 3-1



Member Infor	mation			Unfactored Reactions UNPATTERNED Ib (Uplift)					
Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind	
Plies:	2	Design Method:	LSD	1	722	271	0	0	
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	1030	495	0	0	
Deflection LL:	360	Load Sharing:	No						
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal	Vibration:	Not Checked						
General Load							<u> </u>		
Floor Live:	40 PSF			Bearings	and Fac	tored Reactions			
Dead:	15 PSF			Bearing	Length	Cap. React D/L I	b Total Ld. C	ase Ld. Comb.	
				1 - SPF	2.375"	53% 339 / 108	3 1422 L	1.25D+1.5L	
				2-SPF	6.875"	70% 619 / 154	6 2164 L	1.25D+1.5L	

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3260 ft-lb	6'8 1/16"	7340 ft-lb	0.444 (44%)	1.25D+1.5L	L
Unbraced	3260 ft-lb	6'8 1/16"	3269 ft-lb	0.997 (100%)	1.25D+1.5L	L
Shear	1397 lb	1 5/8"	3080 lb	0.454 (45%)	1.25D+1.5L	L
Perm Defl in.	0.091 (L/1892)	7'1 11/16"	0.481 (∐/360)	0.190 (19%)	D	Uniform
LL Defl inch	0.244 (L/710)	7'1 11/16"	0.481 (L/360)	0.510 (51%)	L	L
TL Defl inch	0.335 (L/516)	7'1 11/16"	0.721 (L/240)	0.460 (46%)	D+L	L

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 3'8" o.c.

5 Bottom flange braced at bearings.



Page 1 of 2

D	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-0-12	(Span)1-4-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-6		Near Face	111 lb	295 lb	0 lb	0 lb	F8
4	Tie-In	1-9-14 to 15-0-12	(Span)1-3-10	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	14-9-6		Тор	19 lb	49 lb	0 lb	0 lb	J7
6	Point	14-9-6		Тор	118 lb	314 lb	0 lb	0 lb	J7
7	Point	14-9-6		Тор	12 lb	32 lb	0 lb	dl 0	J7

Continued on page 2...

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

Lumber

Dry service conditions unless noted otherwise
 Using not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

- LIGHT A Installation

 Loist flanges must not be cut or drilled
 Refer to latest copy of the IJoist product information
 details for framing details, stiffener tables, web hole
 chart, bridging details, multi-ply fastening details and
 handling/erection details
 Damaged IJoists must not be used
 Design assumes too flange to be laterally restrained
 by attached sneathing or as specified in engineering
 notes,

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing length>= 3,5 inches
 For flat roofs

This desig

Manufacturer Info

Nascor by Kott

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





Client: Project:

Address:

GREENPARK

Date: Designer:

8/13/2018

RCO

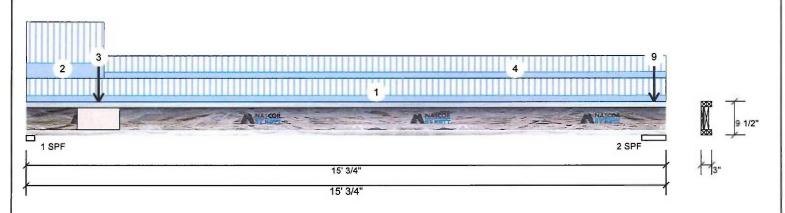
Job Name: HEMLOCK 3-1

Page 2 of 2

Project #:

Level: Ground Floor

2-Ply - PASSED NJ 9.500"



.Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Point	14-9-6		Тор	71 lb	188 lb	0 lb	0 lb	J2
9	Point	14-9-6		Тор	107 lb	0 lb	0 lb	0 lb	Wall Self Weight

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

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

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

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

chemicals

Handling & Installation

- Installation
 Installation
 Idea to a state of the section of the latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
 Damaged Lioists must not be used
 Design assumes top flange to be laterally restrained by attached sheating or as specified in engineering notes.

- Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing lengths—3.5 inches
 For flat roofs provide proper drainage to prevent

This design is valid until 7/10/2021

Manufacturer Info

Nascor by Kott





Client:

Address:

GREENPARK

Project:

8/13/2018 Date:

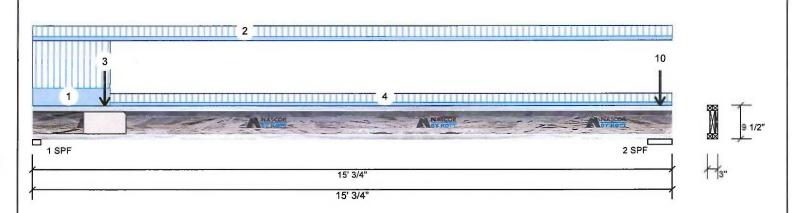
Designer: RCO

Job Name: HEMLOCK 3-1

Project #

2-Ply - PASSED NJ 9.500"

Level: Ground Floor



Member Infor	nation			Unfactor	ed React	ions UNPATTERN	ED lb (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	642	240	0	0
Moisture Condition	: Dry	Building Code:	NBCC 2010 / OBC 2012	2	431	339	148	0
Deflection LL:	360	Load Sharing:	No					
Deflection TL:	240	Deck:	Not Checked					
Importance:	Normal	Vibration:	Not Checked					
General Load								
Floor Live:	40 PSF			Bearings	and Fact	ored Reactions		
Dead:	15 PSF			Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
				1 - SPF	2.375"	47% 300 / 962	1263 L	1.25D+1.5L
Analysis Result	alvsis Results					37% 424 / 721	1145 L	1.25D+1.5L +0.5S

Analysis Actual Location Allowed Capacity Comb. Moment 2136 ft-lb 5'6 3/8" 7340 ft-lb 0.291 (29%) 1.25D+1.5L L 2136 ft-lb 5'6 3/8" 2138 ft-lb 0.999 1.25D+1.5L L Unbraced (100%)1242 lb 1 5/8" 3080 lb 0.403 (40%) 1.25D+1.5L L Shear Perm Defl in. 0.060 (L/2896) 6'10 13/16" 0.481 (L/360) 0.120 (12%) D Uniform LL Defl inch 0.159 (L/1086) 6'10 13/16" 0.481 (L/360) 0.330 (33%) L+0.5S TL Defl inch 0.219 (L/790) 6'10 13/16" 0.721 (L/240) 0.300 (30%) D+L+0.5S



Page 1 of 2

August 17, 2018

Design Notes 1 Girders are designed to be supported on the bottom edge only.

- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'6" o.c.

5 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 15-0-12	(Span)0-8-10	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-6		Far Face	149 lb	398 lb	0 lb	0 lb	F8
4	Tie-In	1-9-14 to 15-0-12	(Span)0-7-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	14-9-6		Тор	11 lb	0 lb	0 lb	0 lb	Wall Self Weight
6	Point	14-9-6		Тор	32 lb	0 lb	74 lb	0 lb	
7	Point	14-9-6		Тор	32 lb	0 lb	0 lb	0 lb	Wall Self Weight

Continued on page 2...

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

Lumber

Dry service conditions unless noted otherwise
 Usist not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

- Liest Nating or ITS (all IATON).

 Liest flanges must not be cut or drilled.

 Refer to latest copy of the Libist product information details for framing details, sufficient tables, web hole chart, bridging details, multi-phy fastening details and handling/erection details.

 Damaged Libists must not be used.

 Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

ponding

 Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing length>= 3,5 inches
7. For flat roofs

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT

Manufacturer Info

Nascor by Kott

CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.





Page 2 of 2 GREENPARK 8/13/2018 Client: Date: isDesign™ Project: Designer: RCO Address: Job Name: HEMLOCK 3-1 Project # Level: Ground Floor 2-Ply - PASSED NJ 9.500" F9-B 2 10 3 1 1 SPF 2 SPF 15' 3/4" 15' 3/4' .Continued from page 1 1D Load Type Location Trib Width Side Dead Live Snow Wind Comments Point 14-9-6 71 lb 58 lb 74 lb 0 lb J7 8 Тор **J7** 9 **Point** 14-9-6 45 lb 119 lb 0 lb 0 lb Top 0 lb Wall Self Weight

53 lb

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

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

10

Point

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

Lumber

Dry service conditions unless noted otherwise
 Uoist not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

14-9-6

Top

- ILJoist flanges must not be cut or drilled
 Refer to latest copy of the LiJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
 Damaged LiJoists must not be used
 Design assumes too flange to be laterally restrained by attached sheathing or as specified in engineering notes.

- Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing lengths—3.5 inches
 For flat roofs provide proper drainage to prevent

This design is valid until 7/10/2021

Manufacturer Info

Nascor by Kott

0 lb

0 lb

Client:

Address:

GREENPARK

Project:

Date:

8/13/2018

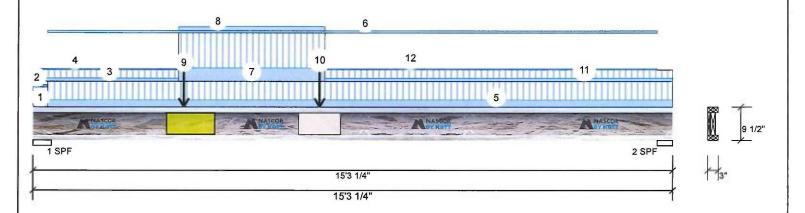
Designer: RCO

Job Name: HEMLOCK 3-1

Project #:

2-Ply - PASSED NJ 9.500" F9-C

Level: Ground Floor



Member Infor	mation			Unfactored Reactions UNPATTERNED Ib (Uplift)						
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	v	Wind
Plies:	2	Design Method:	LSD	1	437		214		0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	331		161		0	0
Deflection LL:	360	Load Sharing:	No	-						
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked	ł						
General Load										
Floor Live:	40 PSF			Bearings	and Fac	tored F	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	5.250"	30%	267 / 655	923	L	1.25D+1.5L
malveia Desui				2 - SPF	4.375"	23%	201 / 497	699	L	1.25D+1.5L

Analysis Results

	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
l	Moment	3691 ft-lb	6'10 1/8"	7340 ft-lb	0.503 (50%)	1.25D+1.5L	L
	Unbraced	3691 ft-lb	6'10 1/8"	3712 ft-lb	0.995 (99%)	1.25D+1.5L	L.
	Shear	906 lb	4 1/2"	3080 lb	0.294 (29%)	1.25D+1.5L	L,
	Perm Defl in.	0.117 (L/1501)	7'3 7/16"	0.486 (L/360)	0.240 (24%)	D	Uniform
	LL Defl inch	0.238 (᠘/735)	7'3 7/16"	0.486 (L/360)	0.490 (49%)	L	L
	TL Defl inch	0.355 (L/493)	7'3 7/16"	0.730 (L/240)	0.490 (49%)	D+L	L

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 3'4" o.c.

5 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)0-8-9	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-4-2		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
3	Tie-In	0-1-2 to 3-5-10	(Span)0-4-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	0-1-2 to 3-5-10		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
5	Tie-In	0-4-2 to 15-3-4	(Span)0-11-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
6	Part, Uniform	0-4-2 to 14-10-13		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
7	Tie-In	3-5-10 to 6-11-10	(Span)1-8-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

Continued on page 2...

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

Lumber

Dry service conditions unless noted otherwise
 Upost not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

- LINGUING & INStallation

 J. Bolst flanges must not be cut or drilled

 Refer to latest copy of the Libist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 Damaged Loists must not be used

 Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

ponding

This design is

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3,5 inches
7. For flat roofs provi

Nascor by Kott

READ ALL NOTES ON THIS PAGE AND ON THE CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE IS AN INTEGRAL PART OF THIS DRAWING AS IT

Manufacturer Info



Page 1 of 2

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4





Version 18.40.162 Powered by iStruct™

Client: Project:

Address:

GREENPARK

Date:

8/13/2018

Page 2 of 2

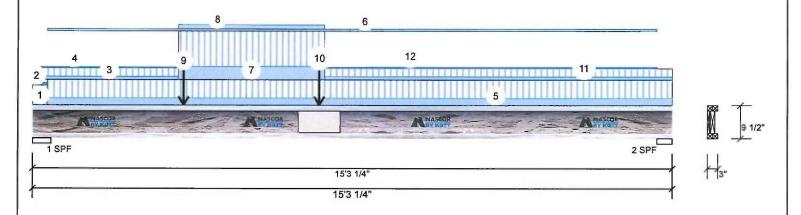
Designer: **RCO**

Job Name: HEMLOCK 3-1

Project #:

F9-C NJ 9,500" 2-Ply - PASSED

Level: Ground Floor



Continued from	page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Part, Uniform	3-5-10 to 6-11-10		Тор	4 PLF	0 PLF	0 PLF	0 PLF	
9	Point	3-7-2		Near Face	48 lb	98 lb	0 lb	0 lb	F7
10	Point	6-10-2		Near Face	85 lb	172 lb	0 lb	0 lb	F7
11	Tie-In	6-11-10 to 15-3-4	(Span)0-4-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
12	Part. Uniform	6-11-10 to 14-10-13		Тор	1 PLF	0 PLF	0 PLF	0 PLF	

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

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

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

Lumber

- Dry service conditions unless noted otherwise
 Idoist not to be treated with fire retardant or corrosive
- chemicals
- Handling & Installation
- Harmouling & Installation
 Hold is a cut or drilled
 Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastering details and handling/erection details
 Damaged Lioists must not be used
 Design assumes top flange to be laterally restrained by attached sheathing or as "Specified in engineering notes."

- Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing length>= 3,5 inches
 For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info

Nascor by Kott





Client: Project:

Address:

GREENPARK

Date: 8/13/2018

Designer: RCO

Job Name: HEMLOCK 3-1 (WOD)

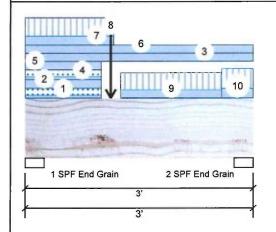
Project #:

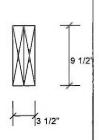
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor





Page 1 of 2

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

Brg	Live	Dead	Snow	Wind
1	128	510	167	0
2	130	328	69	0

Unfactored Reactions UNPATTERNED Ib (Uplift)

Analysis Results Analysis Location Allowed Actual Capacity Comb. 580 ft-lb 1'1 1/2" 16361 ft-lb 0.035 (4%) 1.25D+1.5S L Moment Unbraced 580 ft-lb 1'1 1/2" 16361 ft-lb 0.035 (4%) 1.25D+1.5S L 11 3/4" 6679 lb 0.085 (8%) 1.25D+1.5S L Shear 566 lb Uniform Perm Defl in, 0.002 1'1 11/16" 0,088 (L/360) 0.020 (2%) D (L/17575)LL Defl inch 0.001 1'1 1/2" 0.088 (L/360) 0.010 (1%) S+0.5L (L/39026) TL Defl inch 0.003 1'1 1/2" 0.131 (L/240) 0.020 (2%) D+S+0.5L L

Bearings and Factored Reactions

Bearing	Length	Cap. Re	act D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	16%	637 / 251	888	L	1.25D+1.5S
2 - SPF End Grain	3.000"	10%	410 / 195	606	L	1.25D+1.5L



- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.

(L/12120)

4 Top braced at bearings.

Member Information

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



August 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Part. Uniform	0-0-0 to 1-0-0		Тор	14 PLF	0 PLF	34 PLF	0 PLF		
2	Part. Uniform	0-0-0 to 1-0-0		Тор	44 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight	
3	Part. Uniform	0-0-0 to 3-0-0		Тор	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight	
4	Part, Uniform	0-0-0 to 1-0-0		Near Face	14 PLF	0 PLF	34 PLF	0 PLF		
5	Part, Uniform	0-0-0 to 1-0-0		Near Face	44 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight	

Continued on page 2...

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

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 Tateral Support at bearing points to avoid
lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

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

IN THE DESIGN OF THIS COMPONENT.





Client: Project:

Address:

GREENPARK

8/13/2018

Page 2 of 2

.

Designer: RCO

Job Name: HEMLOCK 3-1 (WOD)

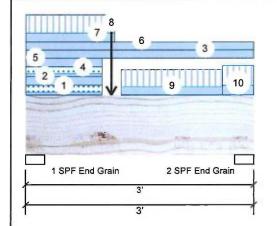
Project #:

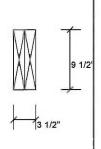
Date:

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	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
7	Part. Uniform	0-0-0 to 1-2-0		Near Face	45 PLF	90 PLF	0 PLF	0 PLF	J3
8	Point	1-1-8		Тор	332 lb	0 lb	168 lb	dl 0	Header Column Header Column
9	Part. Uniform	1-3-1 to 2-7-1		Near Face	41 PLF	85 PLF	0 PLF	0 PLF	J3
10	Part. Uniform	2-7-1 to 3-0-0		Near Face	48 PLF	97 PLF	0 PLF	0 PLF	J3
	Self Weight				8 PLF				

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Forex APA: PR-L318

Manufacturer Info





Client: Project:

Address:

GREENPARK

Date: 8/13/2018

Designer: RCO

Job Name: HEMLOCK 3-1

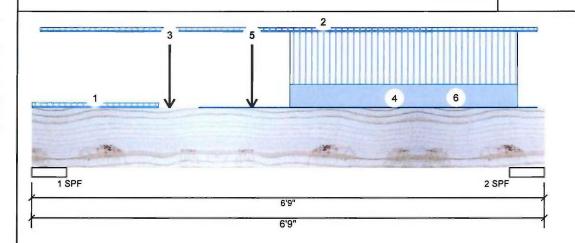
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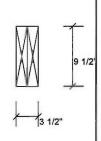
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor





Page 1 of 1

Member Information

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	

40 PSF

15 PSF

Application: Design Method:

Floor (Residential) LSD

Building Code:

NBCC 2010 / OBC 2012

Load Sharing: No

Not Checked Deck: Vibration: Not Checked

Unfactored Reactions UNPATTERNED Ib (Uplift)

Live	Dead	Snow	Wind	
923	401	0	0	
555	262	0	0	
	923	923 401	923 401 0	923 401 0 0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	16%	502 / 1384	1885	L	1.25D+1.5L
2 - SPF	5.500"	10%	327 / 832	1159	L	1.25D+1.5L

requirements

Analysis Results

Floor Live:

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2616 ft-lb	1'9 3/4"	22724 ft-lb	0.115 (12%)	1.25D+1.5L	L
Unbraced	2616 ft-lb	1'9 3/4"	22023 ft-lb	0.119 (12%)	1.25D+1.5L	L
Shear	2026 lb	1'2 1/4"	9277 lb	0.218 (22%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/8434)	3' 11/16"	0.199 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.019 (L/3740)	3' 1/16"	0.199 (L/360)	0.100 (10%)	L	L
TI Deflinch	0.028 (L/2591)	3' 1/4"	0.298 (L/240)	0.090 (9%)	D+L	i

Design Notes

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

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83566	1000
J 80	300
OF ON	NCE
0F ONTARIO	Sky

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind Comments
1	Tie-In	0-0-0 to 1-8-0	(Span)0-4-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF
2	Tie-In	0-1-4 to 6-7-14	(Span)0-3-9	Тор	15 PSF	40 PSF	0 PSF	0 PSF
3	Point	1-9-12		Near Face	388 lb	973 lb	0 lb	0 lb F3
4	Part. Uniform	2-2-6 to 6-7-14		Тор	1 PLF	0 PLF	0 PLF	Pass-Thru Framing Squash Block is
5	Point	2-10-12		Near Face	53 lb	117 lb	0 lb	required at all point loads over bearings
6	Part. Uniform	3-4-12 to 6-4-12		Near Face	49 PLF	112 PLF	0 PLF	Refer to Multiple Member Connection
	Self Weight				8 PLF			Detail for ply to ply nailing or bolting

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suilability 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

Andling & 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 beaming points to avoid
lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

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





Page 1 of 2 GREENPARK Date: 8/13/2018 Client: Designer: RCO Project: isDesign Job Name: HEMLOCK 3-1 Address Project # Level: Second Floor 1.750" X 9.500" 2-Ply - PASSED Forex 2.0E-3000Fb LVL 22 28 32 17 7 24 31 16 27 23 26 I 12 15 5 9 11 25 29 4 8 2 SPF 1 SPF 10'8 7/8 10'8 7/8" **Unfactored Reactions UNPATTERNED Ib (Uplift)** Member Information Dead Wind Girder Floor (Residential) Live Snow Type: Application: Brg Plies: LSD 2 Design Method: 1437 1455 719 0 NBCC 2010 / OBC 2012 Moisture Condition: Dry **Building Code:** 2 1424 1411 689 0 Deflection LL: 360 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Vibration: **Not Checked** Normal General Load Bearings and Factored Reactions 40 PSF Floor Live: Cap. React D/L lb Dead: 15 PSF Total Ld. Case Ld. Comb. Bearing Length 1.25D+1.5L 46% 1819 / 2516 4335 L 1 - SPF 4.375" +0.5S Analysis Results 2 - SPF 3.500" 4244 L 1.25D+1.5L 56% 1764 / 2480 Analysis Actual Location Allowed Capacity Comb. Case T.L. WISE 0.478 (48%) 1.25D+1.5L L 10861 ft-lb 5'2 11/16" 22724 ft-lb Moment +0.5S0.526 (53%) 1.25D+1.5L L 10861 ft-lb 5'2 11/16" 20666 ft-lb Unbraced +0.5S9'8 5/8" 9277 lb 0.475 (47%) 1.25D+1.5L L 4404 lb Shear +0.5S100083566 Perm Defl in. 0.147 (L/833) 5'4 7/16" 0.340 (L/360) 0.430 (43%) D Uniform LL Defl inch 0.187 (L/656) 5'4 1/2" 0.340 (L/360) 0.550 (55%) L+0.5S TL Defl inch 0.334 (L/367) 5'4 7/16" 0.510 (L/240) 0.650 (65%) D+L+0.5S VCE OF Design Notes August 17, 2018 1 Girders are designed to be supported on the bottom edge only. 2 Multiple plies must be fastened together as per manufacturer's details. 3 Top loads must be supported equally by all plies. 4 Top braced at bearings. 5 Bottom braced at bearings. 6 Lateral slenderness ratio based on full section width. ID Load Type Trib Width Side Dead Live Snow Wind Comments Location Part. Uniform 0-0-0 to 0-5-7 Top 34 PLF 0 PLF 80 PLF 0 PLF 2 Part. Uniform 0-0-0 to 0-5-7 Top 23 PLF 0 PLF 53 PLF ⁰Pass-Thru Framing Squash Block is oneduire data and point loads over bearings 3 Part. Uniform 0-0-0 to 0-5-7 Top 80 PI F OPIF 0 PLF O PLF Refer to Multiple Member Connection 4 Part, Uniform 0-5-7 to 1-5-7 Top **34 PLF** 0 PLF 80 PLF 5 Part, Uniform 0-5-7 to 1-5-7 Top **23 PLF** 0 PLF **53 PLF** Obetail for ply to ply nailing or bolting Continued on page 2... requirements Kott Lumber Company 14 Anderson Blvd, Ontario Manufacturer Info For flat roofs provide proper drainage to prevent ponding Notes Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown, it is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads. Handling & Installation Canada

APA: PR-L318

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE

IS AN INTEGRAL PART OF THIS DRAWING AS IT

IN THE DESIGN OF THIS COMPONENT.

CONTAINS SPECIFICATIONS AND CRITERIA USED

905-642-4400

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

LVL beams must not be cut or drilled Refer to manufacturer's product infor regarding installation requirements, in fastening details, beam strength values, an

lateral displacement and rotation

Demaged Beams must not be used
Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and retains.

Page 2 of 2 **GREENPARK** Date: 8/13/2018 Client: RCO Project: Designer: isDesign™ Job Name: HEMLOCK 3-1 Address: Project # Level: Second Floor Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED 22 28 32 17 7 24 31 16 27 10 13 15 23 26 12 30 5 9 25 = 29 11 4 8 9 1/2" 2 SPF 1 SPF 10'8 7/8 10'8 7/8" .Continued from page 1 ID Load Type Location Trib Width Side Dead Live Snow Wind Comments 0 PLF 0 PLF 0 PLF Wall Self Weight 80 PLF 0-5-7 to 1-5-7 6 Part, Uniform Top 0 PLF 0-5-7 to 8-5-7 134 PLF 291 PLF 0 PLF 7 Part. Uniform Near Face 34 PLF 0 PLF 80 PLF 0 PLF 1-5-7 to 2-5-7 8 Part. Uniform Top 53 PLF 0 PLF Part, Uniform 1-5-7 to 2-5-7 **23 PLF** 0 PLF 9 Top 0 PLF 0 PLF 0 PLF Wall Self Weight 80 PLF 10 Part. Uniform 1-5-7 to 2-5-7 Top 80 PLF 0 PLF 34 PLF 0 PLF 11 Part, Uniform 2-5-7 to 3-5-7 Top 53 PLF 0 PLF 2-5-7 to 3-5-7 0 PLF **23 PLF** 12 Part. Uniform Top 80 PLF OPLE 0 PLF 0 PLF Wall Self Weight 13 Part. Uniform 2-5-7 to 3-5-7 Top 0 PLF 0 PLF 34 PLF 80 PLF 14 Part. Uniform 3-5-7 to 4-0-14 Top 23 PLF **53 PLF** 0 PLF 15 Part, Uniform 3-5-7 to 4-0-14 Top 0 PLF OPLE 0 PLF 0 PLF Wall Self Weight 80 PLF 16 Part. Uniform 3-5-7 to 4-5-7 Top 288 lb 0 lb Header Column 0 lb 17 Point 4-2-6 Top 141 lb 80 PLF OPLE 0 PLF 0 PLF Wall Self Weight 4-5-7 to 5-5-7 18 Part. Uniform Top 0 PLF 0 PLF 0 PLF Wall Self Weight 5-5-7 to 6-5-7 80 PLF 19 Part, Uniform Top 0 PLF 0 PLF 0 PLF Wall Self Weight 80 PLF 20 Part. Uniform 6-5-7 to 7-5-7 Top 80 PLF 0 PLF 0 PLF 0 PLF Wall Self Weight 7-5-7 to 8-5-7 21 Part. Uniform Top 288 lb 0 lb Header Column 0 lb 22 **Point** 8-3-6 Top 141 lb 34 PLF 0 PLF 80 PLF 0 PLF Part. Uniform 8-4-14 to 8-5-7 23 Top 23 PLF 0 PLF 53 PLF 0 PLF 24 Part. Uniform 8-4-14 to 8-5-7 Top **34 PLF** 0 PLF 80 PLF 0 PLF 8-5-7 to 9-7-7 Top 25 Part. Uniform **23 PLF** 0 PLF **53 PLF** 0 PLF 8-5-7 to 9-7-7 26 Part. Uniform Top 80 PLF 0 PLF 0 PLF 0 PLF Wall Self Weight Top 27 Part. Uniform 8-5-7 to 9-7-7 J7 8-11-7 Near Face 138 lb 340 lb 0 lb 0 lb 28 Point **34 PLF** 0 PLF 80 PLF 0 PLF Part, Uniform 9-7-7 to 10-8-14 Top 29 **23 PLF** 0 PLF **53 PLF** 0 PLF 30 Part, Uniform 9-7-7 to 10-3-6 Top 80 PLF 0 PLF 0 PLF 0 PLF Wall Self Weight 31 Part. Uniform 9-7-7 to 10-8-14 Top J7 10-3-7 Near Face 79 lb 193 lb 4 lb 0 lb 32 Point 8 PLF Self Weight Kott Lumber Company 14 Anderson Blvd, Ontario Manufacturer Info For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Canada

905-642-4400

APA: PR-L318

design

Calculated Structured Designs is responsible only of the

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

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

Handling & Installation

aged Beams must not be used Design assumes top edge is laterally restrained

lateral displacement and rotation

s must not be cut or drilled manufacturer's product inforn installation requirements, mu details, beam strength values, and

Provide lateral support at bearing points to avoid

Client:

GREENPARK

Project: Address:

8/13/2018 Date:

Designer: RCO

Job Name: HEMLOCK 3-1

Project #:

4.000"

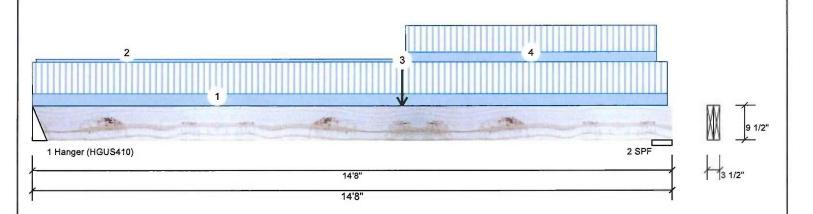
Hanger

2 - SPF 5.500"

1.750" X 9.500" Forex 2.0E-3000Fb LVL

2-Ply - PASSED

Level: Second Floor



Member Inform	nation			Unfactore	d React	ions UNPATTERN	ED lb (Uplift)
Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow
Plies:	2	Design Method:	LSD	1	422	234	0
Moisture Condition	: Dry	Building Code:	NBCC 2010 / OBC 2012	2	585	292	0
Deflection LL:	360	Load Sharing:	No	-			
Deflection TL:	240	Deck:	Not Checked				
Importance:	Normal	Vibration:	Not Checked				
General Load							
Floor Live:	40 PSF			Bearings a	and Fact	ored Reactions	
Dead:	15 PSF			Bearing L	enath	Cap. React D/L lb	Total Ld. Case

Analysis Results Analysis Actual Location Allowed Capacity Comb. 5610 ft-lb 8'5 3/4" 22724 ft-lb 0.247 (25%) 1.25D+1.5L L Moment 8'5 3/4" 18853 ft-lb 5610 ft-lb 0.298 (30%) 1.25D+1.5L L Unbraced 1154 lb 13'5 3/4" 9277 lb 0.124 (12%) 1.25D+1.5L L Shear 7'7 1/8" 0.467 (L/360) 0.180 (18%) D

Perm Defl in. 0.083 (L/2020) Uniform LL Defl inch 0.168 (L/999) 7'8 1/8" 0.467 (L/360) 0.360 (36%) L 1 7'7 13/16" 0.700 (L/240) 0.360 (36%) D+L TL Defl inch 0.251 (L/668)

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow
1	Tie-In	0-0-0 to 14-6-12	(Span)1-1-2	Тор	15 PSF	40 PSF	0 PSF
2	Part. Uniform	0-1-0 to 8-3-11		Тор	2 PLF	0 PLF	0 PLF
3	Point	8-5-12		Far Face	239 lb	583 lb	0 lb
4	Tie-In	8-6-10 to 14-3-12	(Span) 0-10-14	Тор	15 PSF	40 PSF	0 PSF
	Self Weight				8 PLF		

T.L. WISE 100083566

925 L

1242 L

292 / 632

365 / 877

Wind

0 PSF

9%

10%

Wind 0 0

Ld. Comb.

1.25D+1.5L

1.25D+1.5L

Page 1 of 1

August 17, 2018

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

Comments

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

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

Lumber

Dry service conditions unless noted atherwise
 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 too edge is laterally restrained
Provide lateral support all bearing points to avoid
lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex APA: PR-L318

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





Client:

GREENPARK

Address:

Date: 8/13/2018

Designer: RCO

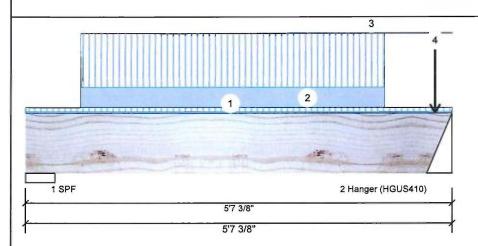
Job Name: HEMLOCK 3-1

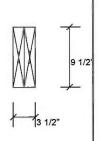
Project #:

1.750" X 9.500" Forex 2.0E-3000Fb LVL

2-Ply - PASSED

Level: Second Floor





Page 1 of 1

M۱	emi	oer	Inf	or	ma	ti	on
M		Jei	ALLE	QI.	1110	FI.	Q II

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	

40 PSF

15 PSF

Application: Design Method: **Building Code:**

Floor (Residential) LSD

NBCC 2010 / OBC 2012

Load Sharing: No

Deck: Not Checked Vibration: Not Checked

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind
1	667	273	0	0
2	973	388	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.651"	13%	341 / 1000	1341	L	1.25D+1.5L
2 - Hanger	4.000"	19%	485 / 1459	1944	L	1.25D+1.5L

Analysis Results

Floor Live:

Dead:

ſ	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
ı	Moment	1887 ft-lb	2'9 3/4"	22724 ft-lb	0.083 (8%)	1.25D+1.5L	L
l	Unbraced	1887 ft-lb	2'9 3/4"	22724 ft-lb	0.083 (8%)	1.25D+1.5L	L
l	Shear	1309 lb	4'6 5/8"	9277 lb	0.141 (14%)	1.25D+1.5L	L
	Perm Defl in.	0.005 (L/12753)	2'9 15/16"	0.167 (L/360)	0.030 (3%)	D	Uniform
l	LL Defl inch	0.012 (L/5132)	2'9 7/8"	0,167 (L/360)	0.070 (7%)	L	L
ĺ	TL Defl inch	0.016 (L/3660)	2'9 7/8"	0.251 (L/240)	0.070 (7%)	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

O DOLLOIN	braced at bearings.						
7 Lateral	slenderness ratio based	on full section width.					
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow
1	Tie-In	0-0-0 to 5-7-6	(Span)1-1-0	Тор	15 PSF	40 PSF	0 PSF
2	Part. Uniform	0-8-11 to 4-8-11		Far Face	109 PLF	290 PLF	0 PLF
3	Part. Uniform	3-5-5 to 5-7-6		Тор	1 PLF	0 PLF	0 PLF
4	Point	5-4-11		Far Face	134 lb	358 lb	0 lb
l	Self Weight				8 PLF		



Comments

Pass-Thru Framing Squash Block is required at all point loads over bearings Refer to Multiple Member Connection Detail for ply to ply nailing or bolting

Handling & Installation

- Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads. LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code

 - approvals
 Damaged Beams must not be used
 Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Wind

0 PSF

requirements

Forex APA: PR-L318

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

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

. ---GREENPARK 8/13/2018 Page 1 of 1 Client: Date: Project: Designer: RCO isDesign Address: Job Name: HEMLOCK 3-1 Project #: evel: Second Floor Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED 1 SPF 2 Hanger (HUS1.81/10) 7'11 7/8' 7'11 7/8" Member Information **Unfactored Reactions UNPATTERNED lb (Uplift)** Girder Type: Application: Floor (Residential) Live Dead Snow Wind Plies: Design Method: LSD 978 1 389 0 0 Moisture Condition: Dry **Building Code:** NBCC 2010 / OBC 2012 0 2 583 239 0 Deflection LL: 360 Load Sharing: Deflection TL: Not Checked 240 Importance: Normal Vibration: Not Checked General Load 40 PSF Bearings and Factored Reactions Floor Live: 15 PSF Dead: Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 1 - SPF 4.500" 40% 486 / 1467 1953 L 1.25D+1.5L 3.000 30% 298 / 874 1172 L 1.25D+1.5L 2 -Analysis Results Hanger Analysis Actual Location Allowed Comb. T.L. WISE 100083566 Capacity Case 3003 ft-lb 0.264 (26%) 1.25D+1.5L L Moment 3'2 15/16" 11362 ft-lb 3003 ft-lb 3'2 15/16" 4978 ft-lb 0.603 (60%) 1.25D+1.5L L Unbraced 1594 lb 1'1 1/4" 4638 lb Shear 0.344 (34%) 1.25D+1.5L L Perm Defl in. 0.028 (L/3259) 3'9 3/4" 0.250 (L/360) 0.110 (11%) D Uniform LL Defl inch 0.069 (L/1310) 3'9 9/16" 0.250 (L/360) 0.270 (27%) L L 100083566 TL Defl inch 0.096 (L/934) 3'9 5/8" 0.374 (L/240) 0.260 (26%) D+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. August 17, 2018 4 Bottom braced at bearings. ID Load Type Location Trib Width Side Dead Live Wind Comments Snow 1 Tie-In 0-0-0 to 0-3-6 (Span)0-10-7 Top 15 PSF 40 PSF 0 PSF 0 PSF Part. Uniform 0-4-8 to 3-6-8 90 PLF 240 PLF 0 PLF 0 PLF 2 Top 117 lb 3 Point 1-2-12 Far Face 46 lb 0 lb 0 lb J3 Part, Uniform 1-8-12 to 4-8-12 Far Face 44 PLF 112 PLF 0 PLF 0 PLF Pass Thru Framing Squash Block is 5 Part, Uniform 4-8-12 to 6-8-12 Far Face 45 PLF 116 PLF 0 PLF required at all point loads over bearings 6 Point 7-2-12 Far Face 42 lb 111 lb 0 lb Self Weight 4 PLF **Refer to Multiple Member Connection** Detail for ply to ply nailing or bolting requirements



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

Lumber

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

Handling & Installation

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

For flat roofs provide proper drainage to prevent ponding

This design

Manufacturer Info Forex APA: PR-L318

READ ALL NOTES ON THIS PAGE AND ON THE

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

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



Client: Project:

Address:

GREENPARK

Date:

8/13/2018

Designer: RCO Job Name: HEMLOCK 3-1

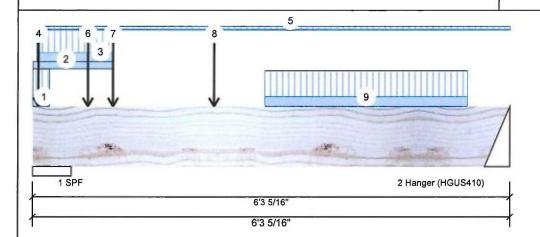
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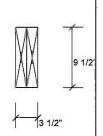
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor





Page 1 of 2

. _ _

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

Application: Floor (Residential) Design Method: LSD NBCC 2010 / OBC 2012 **Building Code:**

Load Sharing: No

Not Checked Deck: Vibration: Not Checked

Unfacto	red Reaction	SUNPATTER	NED IB (Uplif	t)
Brg	Live	Dead	Snow	Wind
1	3689	1601	0	0
2	916	382	0	0

Bearings and Factored Reactions

Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 58% 2001 / 5534 7535 L 1.25D+1.5L 1 - SPF 6.078" 4.000" 18% 477 / 1375 1852 L 1.25D+1.5L Hanger

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3107 ft-lb	2'4 5/8"	22724 ft-lb	0.137 (14%)	1.25D+1.5L	L
Unbraced	3107 ft-lb	2'4 5/8"	22724 ft-lb	0.137 (14%)	1.25D+1.5L	L
Shear	3102 lb	1'2 13/16"	9277 lb	0.334 (33%)	1.25D+1.5L	L
Perm Defl in.	0.010 (L/6974)	3' 7/8"	0.185 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.023 (L/2957)	3'1 3/16"	0.185 (L/360)	0.120 (12%)	L	L
TL Defl inch	0.032 (L/2076)	3'1 1/8"	0.278 (L/240)	0.120 (12%)	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
- 5
- 6
- 8

4 Multiple	plies must be fastened to	gether as per manuf	acturer's details	August 17, 2018					
5 Top load	s must be supported equ	ally by all plies.							
6 Top brac	ed at bearings.								
7 Bottom b	praced at bearings.								
8 Lateral s	lenderness ratio based o	n full section width,							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-2-10		Тор	124 PLF	299 PLF	0 PLF	0 PLF	J7

ID ents 1 0 PLF 2 Part. Uniform 0-0-0 to 1-0-10 Тор 80 PLF 0 PLF 0 PLF Wall Self Weight 3 Part. Uniform Тор 0 PLF 0 PLF J7 0-0-10 to 1-0-10 **98 PLF** 253 PLF 4 Point 0-0-14 Near Face 350 lb 893 lb 0 lb 0 lb F5 Continued on page 2...

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

Lumber

- Dry service conditions unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- chemicals
- Handling & Installation
- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- approvals

 Damaged Beams must not be used

 Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation
- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex APA: PR-L318

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

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

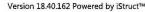
T.L. WISE 100083566

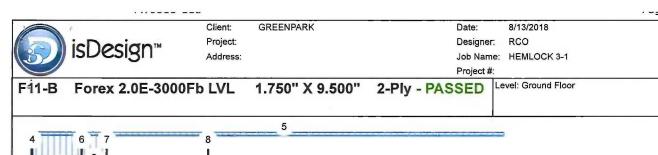
100083566

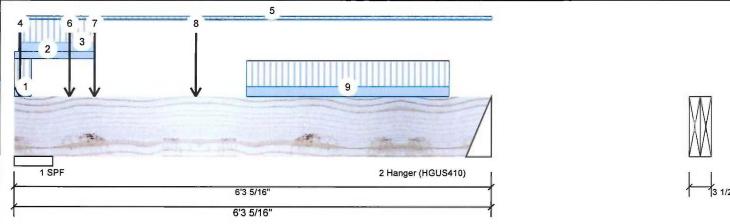
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Continued fr	rom page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Tie-In	0-1-12 to 6-3-5	(Span)1-6-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	0-8-11		Тор	661 lb	1645 lb	0 lb	0 lb	F4 F4 F3 F3
7	Point	1-0-10		Far Face	191 lb	392 lb	0 lb	0 lb	J7
8	Point	2-4-10		Far Face	161 lb	391 lb	0 lb	0 lb	J7
9	Part. Uniform	3-0-10 to 5-8-10		Far Face	110 PLF	293 PLF	0 PLF	0 PLF	
	Self Weight				8 PLF				

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

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

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

Lumber

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

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 adge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info

Forex APA: PR-L318

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



Page 2 of 2

Client: Project:

Address:

GREENPARK

Date:

8/13/2018

Designer: RCO

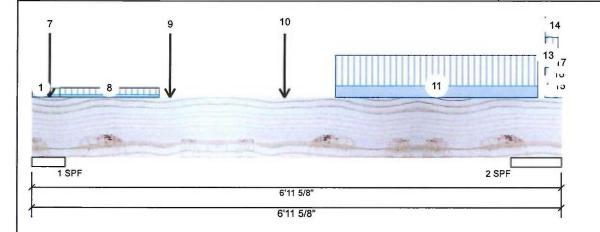
Job Name: HEMLOCK 3-1

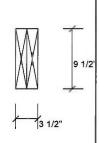
Project #:

Forex 2.0E-3000Fb LVL 1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor





Page 1 of 2

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

Mambau Information

Application: Design Method:

Floor (Residential)

Building Code: NBCC 2010 / OBC 2012 No

Load Sharing:

Deck: Not Checked Not Checked Vibration:

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	vvina
1	1874	847	0	0
2	611	283	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF	5.250"	34%	1059 / 2811	3870	L	1.25D+1.5L	
2 - SPE	8 000"	7%	353 / 917	1270	T.	1 25D+1 5L	

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2502 ft-lb	1'9 3/4"	22724 ft-lb	0.110 (11%)	1.25D+1.5L	L
Unbraced	2502 ft-lb	1'9 3/4"	22015 ft-lb	0.114 (11%)	1.25D+1.5L	L
Shear	1927 lb	1'2"	9277 lb	0.208 (21%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/8934)	3'1 3/8"	0.200 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.019 (L/3855)	3'1 7/16"	0.200 (L/360)	0.090 (9%)	L	L
TL Defl inch	0.027 (L/2693)	3'1 7/16"	0.299 (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.

PROFESSIONAL	10
T.L. WISE 100083566	MGINEER
Sul 8	
WCE OF ON	

August 17, 2018

/ Lateral s	siendemess raud based d	on rull section width.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 0-4-6	(Span)1-3-9	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Point	0-2-12		Тор	17 lb	46 lb	0 lb	0 lb	J5	
3	Point	0-2-12		Тор	6 lb	13 lb	0 lb	0 lb	J2	
4	Point	0-2-12		Тор	20 lb	0 lb	0 lb	0 lb	Wall Self Weight	
5	Point	0-2-12		Тор	401 lb	923 lb	0 lb	0 lb	F11 F11	
ontinued or	n page 2									

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

Lumber

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

chemicals

Handling & Installation

andling & 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 adge is laterally restrained
Provide lateral support at Deaming points to avoid
lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

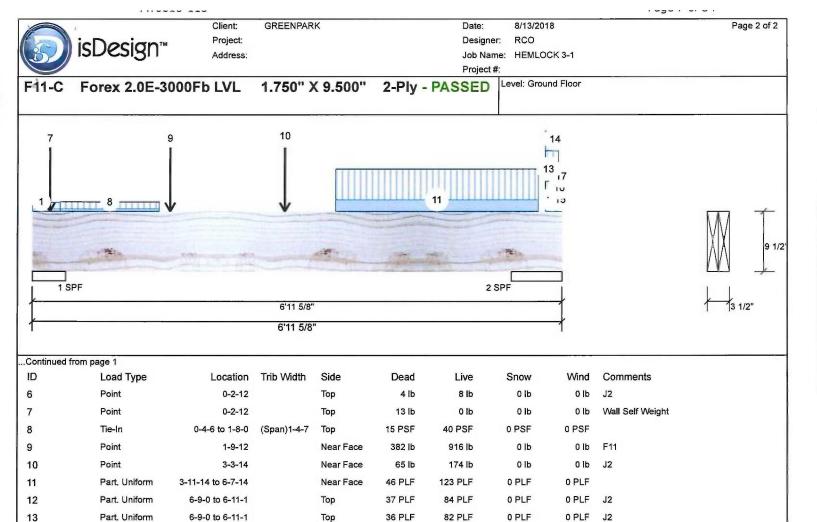
Manufacturer Info

Forex APA: PR-L318

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







80 PLF

14 PLF

14 PLF

31 PLF

8 PLF

Top

Top

Top

Top

0 PLF

33 PLF

32 PLF

0 PLF

J2

Wall Self Weight

Wall Self Weight

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

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

14

15

16

17

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

Part. Uniform

Part. Uniform

Part. Uniform

Part. Uniform

Self Weight

Lumber

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

chemicals

Handling & Installation

6-9-0 to 6-11-1

6-11-1 to 6-11-10

6-11-1 to 6-11-10

6-11-1 to 6-11-10

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

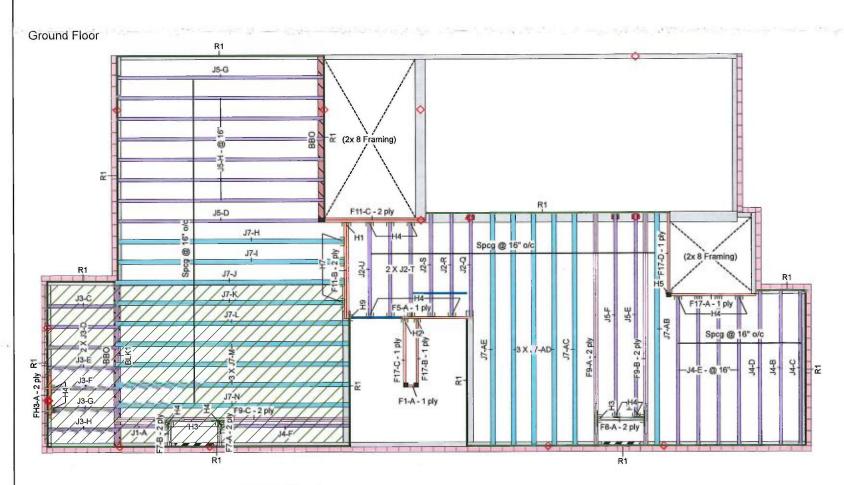
6. For flat roofs provide proper drainage to prevent

Manufacturer Info

APA: PR-L318







WHERE FOUNDATION WALLS MUST BE LATERALLY SUPPORTED AND NO DETAIL IS PROVIDED BY THE BUILDING DESIGNER, SEE DETAIL U3 IN THE NASCOR SPECIFIER GUIDE

This certification is to confirm that:

1. The loads used in the calculation of the attached approved components conform to the floor assembly shown on this layout.

2. The floor joists comply with the Nascor span table for the loads and spacing shown on this layout.

The floor system must be assembled in accordance to the Nascor Specifier Guide. Multi-ply members must be attached together as per the included multiple member connection detail.

All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.



All work shall conform to the Ontario Building Code O. Reg. 332/12 as amended

Engineered floor Joists shall be installed in accordance with the supplier's layout and specifications forming part of the permit drawings.



Wall Wall Opening Norbord Rimboard Plus 1.125 X 9.5 NJ 9.5 NJ60U 9.5 NJH 9.5 Forex 2.0E-3000Fb LVL 1.75 X 9.5

Load from Above

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R
- 3. LVL CCMC -14056-R
- 4. CAN/CSA-086-09
- 5. CCMC -12787-R APA PR-L310(C)

Ground LVL/LS										MACCOD		
	Descr		Width	De	pth	Qty	Plies	Pcs	Length	NASCOR		
F5	Forex 2.0E-3	000Fb LVL	1.75	1	9.5		2000	- 1	10-0-0	And the Party of t		
F11	Forex 2.0E-3	000Fb LVL	1.75		9.5	2	2	4	8-0-0	Layout Name Lot / 2 L		
F17	Forex 2.0E-3	000Fb LVL	1.75		9.5			4	6-0-0	Design Method		
FH3	Forex 2.0E-3	000Fb LVL	1.75		9.5	1	2	2	4-0-0	Description		
F1	Forex 2.0E-3	000Fb LVL	1.75		9.5			1	2-0-0	MINNISALE HOMES CORP. BRAMPTON, ONT.		
I Joist (Flush)									Revised		
Label	Descr	iption	Width	De	pth	Qty	Plies	Pcs	Length	August 13, 2018		
F9	NJ		1.5		9.5	3	2	6	16-0-0	Builder		
F8	NJ		1.5		9.5	1	2	2	4-0-0	GREENPARK		
F7	NJ		1.5		9.5	2	2	4	2-0-0			
J7	NJ60U		3.5		9.5			15	16-0-0	Sales Rep		
J5	NJH		2.5		9.5			10	14-0-0	RM		
J4	NJH		2.5		9.5			8	10-0-0	Designer		
J2	NJH		2.5		9.5			6	8-0-0	RCO		
J3	NJH		2.5	,	9.5			7	6-0-0	Shipping		
J1	NJH		2.5		9.5			1	4-0-0			
Rim Bo	ard					141				Project		
Label	Descr	iption	Width	De	pth	Qty	Plies	Pcs	Length	Builder's Project		
R1		rd Rimboard .125 X 9.5	1.125		9.5			12	12	Kott Lumber Company 14 Anderson Blvd		
Blockin	g											
Label	Descr	iption	Width	De	pth	Qty	Plies	Pcs	Length	Stouffville, Ontario		
BLK1	NJH		2.5		9.5	LinFt		Varies	8-0-0	Canada		
Hanger									<u></u>	L4A 7X4		
						Ве	am/Girde		ported ember	905-642-4400 Job Path		
Label	Pcs	Descriptio	n	Skew	Slop	e fa	asteners	fas	teners	D:\Users\rochavillo\WORK FROM		
H1	1	HGUS410					46 16d	1	6 16d	HOME\GREENPARK\MINNISALE		
H2	2	HUS1.81/1	0			+	30 16d	1	0 16d	HOMES/HEMLOCK 3/HEMLOCK 3-1		
НЗ	4	LT2-159				4	10dx1 1/2	2 10	dx1 1/2	\FLOOR\REV\WOD\HEMLOCK 3-1.is		
H4	18	LT259				4	10dx1 1/2	2 10	dx1 1/2	Ground Floor		
H5	1	L90								Design Method LSD		
H7	4	LT359					4 10d	2 10	dx1 1/2	Building Code NBCC 2010 / OBC		
	_	1				-				2012		

Floor

Loads

Live

Dead

Deflection Joist

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

LL Span L/

TL Span ⊥/

LL Cant 2L/

TL Cant 2L/

Decking

Thickness

Fastener

Vibration

Deck

Deflection Girder

H9 NOTES:

SDS

1

HUCQ1.81/9-

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

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

Rim parallel to joists: 1-1/8" rimboard with 2"x 4" block (1/16" longer than rim depth @ 16" o/c). All other components and structural elements supporting the floor system such as beams, walls, columns, and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of Others.

Hatch area represents ceramic tiled floor with an addtional dead load

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

ARCHITECTURAL DRAWINGS:

VA3 DESIGN 255 Consumers Rd., Suite 120, Toronto, ON Date: Rev.5; July 23,2018 Project No: 18012 Model: Hemlock 3



2012

15

480

360

480

360

360

240

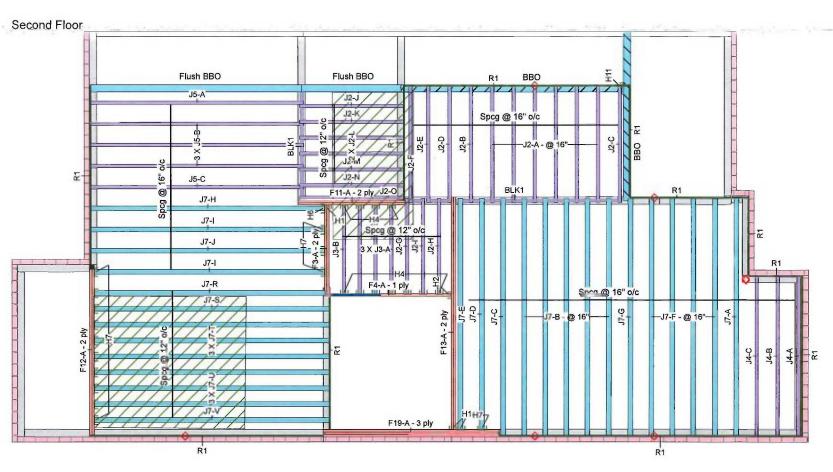
480

360

3/4"

SPF Plywood

Nailed & Glued



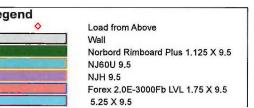
4 BEDROOM OPTION



This certification is to confirm that: 1. The loads used in the calculation of the attached approved components conform to the floor assembly shown on this layout. 2. The floor joists comply with the Nascor span table for the loads and spacing shown on this layout.

The floor system must be assembled in accordance to the Nascor Specifier Guide. Multi-ply members must be attached together as per the included multiple member connection detail.

All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.



- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R
- 4. CAN/CSA-086-09

nd	
♦	Load from Above
	Wall
	Norbord Rimboard Plus 1.125 X 9,5
	NJ60U 9.5
10-12-0	NJH 9.5
	Forex 2.0E-3000Fb LVL 1.75 X 9.5
	5.25 X 9.5

- 3. LVL CCMC -14056-R
- 5. CCMC -12787-R APA PR-L310(C)

Second LVL/LS	Floor	eh)									
Label	Descr		Width	n De	pth	(Qty	Plies	Pcs	Length	N
F13	Forex	Forex 2.0E-3000Fb LVL		5	9.5		1	2	2	16-0-0	- 1
F19	Forex 2.0E-3	000Fb LVL	1.7	1.75 9.5			1	3	3	12-0-0	Lay
F12	Forex 2.0E-3000Fb LVL		1.75	5	9.5		1	2	2	12-0-0	De
F11	Forex 2.0E-3	orex .0E-3000Fb LVL		5	9.5		1 2		2	8-0-0	De
F4	Forex 2.0E-3	Forex 2.0E-3000Fb LVL		5	9.5				1	8-0-0	M Bi
F3	Forex 2.0E-3	000Fb LVL	1.78	5	9.5		1	2	2	6-0-0	Re
Joist ((Flush)										1
Label	Descr	escription		n De	pth	(Qty	Plies	Pcs	Length	Bu
J7	NJ60U		3.5	5	9.5				27	16-0-0	G
J5	NJH		2.5		9.5				5	14-0-0	Sa
_ J4	NJH		2.5	_	9.5				3	10-0-0	RI
J2		NJH		5	9.5				21	8-0-0	De
J3	NJH		2.5	5	9.5				4	6-0-0	R
Rim Bo											Sh
Label	Descr		Width		Depth		Qty	Plies	Pcs	Length	_
R1	Plus 1.	d Rimboard 125 X 9.5	1.125	5	9.5				9	12	Pro
3lockin	g							- 5			K
Label	Descr	iption	Width	n De	pth	(Qty	Plies	Pcs	Length	
BLK1	NJH		2.5		9.5	Li	inFt		Varies	13-0-0	14
Hanger	•					0.	Bea	am/Girder	Sur	ported	St Ca
									Me	ember	L4
Label	Pcs	Description	n	Skew	Slo	ре	fa	steners	fas	teners	90
H1	2	HGUS410						46 16d	1	6 16d	Joh
H2	1	HUS1.81/10)					30 16d	1	0 16d	D:
H4	11	LT259					4 1	0dx1 1/2	2 10	dx1 1/2	Н
H6	1	LT359									HO VFI
H7	15	LT359						4 10d	2 10	dx1 1/2	3-
H11	1	Unknown Hanger									Sec

NOTES:

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

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

Rim parallel to joists: 1-1/8" rimboard with 2"x 4" block (1/16" longer than rim depth @ 16" o/c). All other components and structural elements supporting the floor system such as beams, walls, columns, and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of Others.

Hatch area represents ceramic tiled floor with an additional dead load

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

ARCHITECTURAL DRAWINGS:

VA3 DESIGN 255 Consumers Rd., Suite 120, Toronto, ON Date: Rev.5; July 23,2018 Project No: 18012 Model: Hemlock 3

ayout Name HEMLOCK 3-1 esign Method escription MINNISALE HOMES CORP. BRAMPTON, ONT. evised August 13, 2018 uilder GREENPARK ales Rep esigner RCO hipping roject uilder's Project Kott Lumber Company 4 Anderson Blvd Stouffville, Ontario Canada 4A 7X4 905-642-4400 b Path D:\Users\rochavillo\WORK FROM HOME\GREENPARK\MINNISALE HOMES\HEMLOCK 3\HEMLOCK 3-FLOOR\REV\4 BED OPT\HEMLOCK 3-1.isl econd Floor LSD Design Method Building Code NBCC 2010 / OBC 2012 Floor Loads 40 Live Dead 15 Deflection Joist LL Span L/ 480 TL Span L/ 360 480 LL Cant 2L/ TL Cant 2L/ 360 Deflection Girder LL Span L/ 360 TL Span L/ 240 LL Cant 2L/ 480 TL Cant 2L/ 360 Decking Deck SPF Plywood

Thickness

Fastener

Vibration

Ceiling:

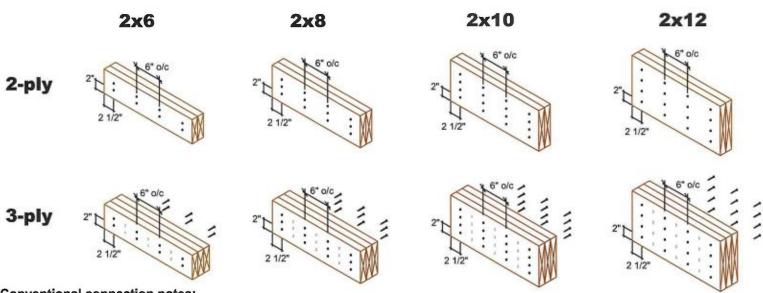
5/8"

Nailed & Glued

Gypsum 1/2"

MULTIPLE MEMBER CONNECTIONS

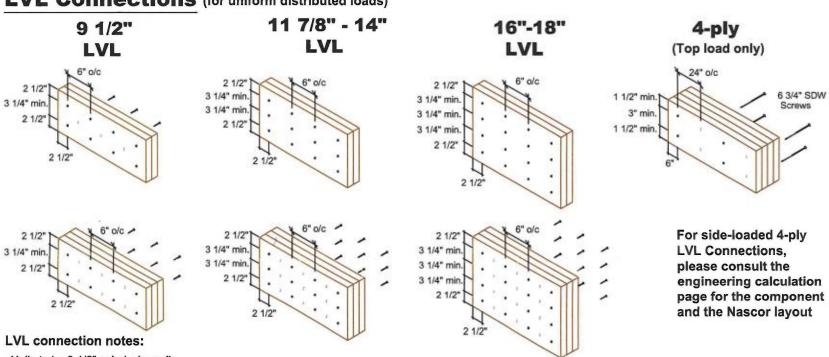
Conventional Connections (for uniform distributed loads)



Conventional connection notes:

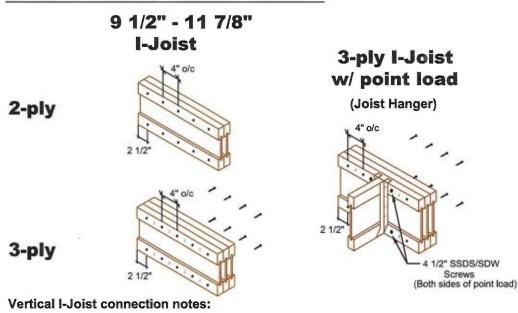
- -Nails to be 3" 10d spiral wire nails.
- -Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

LVL Connections (for uniform distributed loads)



- -Nails to be 3 1/2" spiral wire nails.
- -Nails to be located a minimum of 2 1/2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
- -Minimum 3 1/4" spacing between rows.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail or screw driven from the opposite side.

Vertical I-Joist Connections (for uniform distributed loads)



- -Nails to be 3" spiral wire nails.
- -Nails to be located at centre of top and bottom flanges. Start all nails a minimum of 2 1/2" in from ends.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.



KOTT 3228 Moodie Drive Ottawa, ON **K2H 7V1**