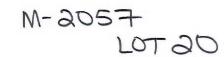
# Engineering Note Page (ENP-2)

**REVISION 2009-10-09** 



# 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 <a href="http://www.nascor.ca">http://www.nascor.ca</a>.

# **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: Project: Address: **GREEN YORK HOMES** 

5/31/2018

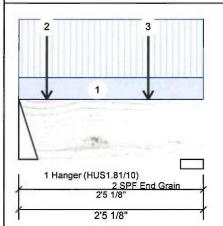
Designer:

Job Name: LIANA 2 (ELEV.1)

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED Level: Ground Floor



Wind

Page 1 of 1

Member	Information

Туре:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition	on: 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		

### **Unfactored Reactions UNPATTERNED Ib (Uplift)** Live Dead Snow

1	299	116	0	0	
2	258	101	0	0	
7					

### Analysis Results

•						
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	214 ft-lb	1'6 7/8"	11362 ft-lb	0.019 (2%)	1.25D+1.5L	L
Unbraced	214 ft-lb	1'6 7/8"	10729 ft-lb	0.020 (2%)	1.25D+1.5L	L
Shear	438 lb	11 3/4"	4638 lb	0.094 (9%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/58713)	1'4 3/8"	0.067 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.001 (L/23005)	1'4 9/16"	0.067 (L/360)	0.020 (2%)	L	L
TL Defl inch	0.001 (L/16529)	1'4 7/16"	0.100 (L/240)	0.010 (1%)	D+L	L

# **Bearings and Factored Reactions**

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - Hanger	3.000"	15%	145 / 449	594	L	1.25D+1.5L	
2 - SPF End Grain	3.625"	11%	127 / 387	514	L	1.25D+1.5L	

**Design Notes** 

- 1 Fill all hanger nailing holes.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings.

2	2 Girders are designed to be supported on the bottom edge only.
-	The bessed at bootines

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

READ ALL NOTES ON THIS PAGE AND ON

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

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



ı	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
ı	1	Tie-In	0-0-0 to 2-5-2	(Span)3-11-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
ı	2	Point	0-4-6		Far Face	65 lb	175 lb	0 lb	0 lb	J3
I	3	Point	1-8-6		Far Face	72 lb	192 lb	0 lb	0 lb	J3
I		Self Weight				4 PLF				

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design ortheria 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 information
regarding installation requirements, multi-ply
fastening details, beam strength values, and code
approvals 1.

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

6 For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

APA: PR-L318







Client: Project: Address: **GREEN YORK HOMES** 

Date:

5/31/2018 RCO Designer:

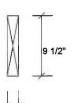
LIANA 2 (ELEV.1) Job Name:

Project #:

Forex 2.0E-3000Fb LVL

Level: Ground Floor 1.750" X 9.500" - PASSED

2 1 SPF 2 SPF End Grain 7'1 1/8'



Wind

0

0

Page 1 of 1

Туре:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	

Member Information

40 PSF 15 PSF Application: Floor (Residential)

Design Method: **Building Code:** NBCC 2010 / OBC 2012 Load Sharing:

Deck: Not Checked Vibration: Not Checked

Rearings	and Fac	tored R	eactions

156

84

**Unfactored Reactions UNPATTERNED Ib (Uplift)** 

Dead

72

45

Snow

0

0

Bearing L	ength Ca	ap. Read	t D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF 1	.750" 1	7%	90 / 234	324	L	1.25D+1.5L
2 - SPF 1. End	.875"	7%	56 / 125	182	L	1.25D+1.5L

Grain

1

2

**Analysis Results** Analysis Actual Location Allowed Capacity Comb. Case Moment 453 ft-lb 2'11 9/16" 11362 ft-lb 0.040 (4%) 1.25D+1.5L L Unbraced 453 ft-lb 2'11 9/16" 5389 ft-lb 0.084 (8%) 1.25D+1.5L L 228 lb 0.049 (5%) 1.25D+1.5L L Shear 10 1/2" 4638 lb Perm Defl in. 0.004 3'4 1/8" 0.231 (L/360) 0.020 (2%) D Uniform (L/20045) LL Defl inch 0.009 (L/9718) 3'3 1/2" 0.231 (L/360) 0.040 (4%) L TL Defl inch 0.013 (L/6545) 3'3 11/16" 0.346 (L/240) 0.040 (4%) D+L L

Design Notes

Floor Live:

Dead:

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

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

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

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



O DOLLOIN	bracea at bearinge,									
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 7-1-2	(Span)0-7-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Part. Uniform	0-0-0 to 3-8-0		Тор	15 PLF	40 PLF	0 PLF	0 PLF		
	Self Weight				4 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 corrosis.

chemicals

Handling & Installation

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

Forex APA: PR-L318







Client: Project: Address: **GREEN YORK HOMES** 

Date:

5/31/2018

Designer: **RCO** 

Job Name: LIANA 2 (ELEV.1)

Project #:

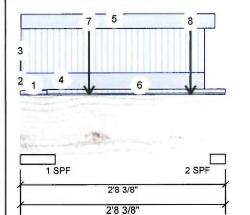
Forex 2.0E-3000Fb LVL F3-A

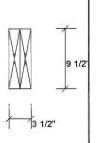
1.750" X 9.500"

2-Ply - PASSED

Brg

Level: Ground Floor





Wind

Page 1 of 2

Member l	nformation	1
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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)

LSD

NBCC 2010 / OBC 2012

Load Sharing: Deck:

Design Method:

**Building Code:** 

Vibration:

Not Checked Not Checked

Unfactored Reactions U	NPATTERNED I	b (Uplift)
------------------------	--------------	------------

1	669	380	0	0
2	523	292	0	0

Dead

Snow

# **Bearings and Factored Reactions**

Live

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.		
1 - SPF	5.500"	12%	475 / 1003	1478	L	1.25D+1.5L		
2 - SPF	2.375"	22%	365 / 784	1150	L	1.25D+1.5L		

**Analysis Results** 

Γ	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
l	Moment	607 ft-lb	1'4 1/8"	22724 ft-lb	0.027 (3%)	1.25D+1.5L	L
l	Unbraced	607 ft-lb	1'4 1/8"	22724 ft-lb	0.027 (3%)	1.25D+1.5L	L
l	Shear	729 lb	1'2 1/4"	9277 lb	0.079 (8%)	1.25D+1.5L	L
	Perm Defl in.	0.001 (L/32357)	1'5 1/8"	0.072 (L/360)	0.010 (1%)	D	Uniform
	LL Defl inch	0.001 (L/18072)	1'4 11/16"	0.072 (L/360)	0.020 (2%)	L	L
	TL Defl inch	0.002 (L/11598)	1'4 13/16"	0.108 (L/240)	0.020 (2%)	D+L	L

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

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

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



### **Design Notes**

- 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.
- e ratio based on full section width

o Lateral Sieno	6 Lateral stenderness ratio based on full section width.										
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments		
1	Tie-In	0-0-0 to 0-4-4	(Span)0-10-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF			
2	Part. Uniform	0-0-0 to 0-0-2		Тор	46 PLF	123 PLF	0 PLF	0 PLF	J5		
3	Part. Uniform	0-0-0 to 0-0-2		Тор	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight		
4	Part. Uniform	0-0-2 to 2-5-2		Тор	92 PLF	246 PLF	0 PLF	0 PLF	J5		
5	Part. Uniform	0-0-2 to 2-6-12		Тор	80 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

- 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 bearing points to avoid
  lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

APA: PR-L318





Client: Project: Address: **GREEN YORK HOMES** 

Date:

5/31/2018

RCO Job Name: LIANA 2 (ELEV.1)

Page 2 of 2

Project #:

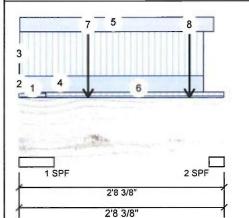
Designer:

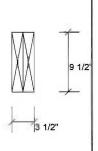
Forex 2.0E-3000Fb LVL F3-A

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	Tie-In	0-4-4 to 2-8-6	(Span)1-0-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
7	Point	0-10-14		Far Face	120 lb	319 lb	0 lb	0 lb	J5
8	Point	2-2-14		Far Face	83 lb	220 lb	0 lb	0 lb	J5
	Self Weight				8 PLF				

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

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

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.

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

Handling & Installation

Handling & Installation

1. LVL beams must not be out or drilled

2. Refer to manufacturers product information regarding installation requirements, multi-ptly fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex APA: PR-L318







### Member Information Type: Plies: Moisture Condition: Dry **Building Code:** 2 1087 464 0 Deflection LL: Load Sharing: Deflection TL: Not Checked Deck: Importance: Normal Vibration: Not Checked General Load Bearings and Factored Reactions Floor Live: 40 PSF Dead: 15 PSF Total Ld. Case Ld. Comb. Bearing Length Cap. React D/L lb 1 - SPF 4.125" 9% 241 / 560 801 L 1.25D+1.5L 1.25D+1.5L 2 - SPF 6.875" 15% 580 / 1631 2211 L

**Analysis Results** 

Analysis         Actual         Location         Allowed         Capacity         Comb.         Case           Moment         4654 ft-lb         9'8 1/2"         22724 ft-lb         0.205 (20%) 1.25D+1.5L         L           Unbraced         4654 ft-lb         9'8 1/2"         19392 ft-lb         0.240 (24%) 1.25D+1.5L         L           Shear         1816 lb         12'5 3/4"         9277 lb         0.196 (20%) 1.25D+1.5L         L           Perm Defl in.         0.058 (L/2669)         7'3 7/8"         0.433 (L/360)         0.130 (13%) D         Uniform           LL Defl inch         0.127 (L/1225)         7'5 1/4"         0.433 (L/360)         0.290 (29%) L         L           TL Defl inch         0.186 (L/840)         7'4 13/16"         0.649 (L/240)         0.290 (29%) D+L         L							
Unbraced         4654 ft-lb         9'8 1/2"         19392 ft-lb         0.240 (24%) 1.25D+1.5L         L           Shear         1816 lb         12'5 3/4"         9277 lb         0.196 (20%) 1.25D+1.5L         L           Perm Defl in.         0.058 (L/2669)         7'3 7/8"         0.433 (L/360)         0.130 (13%) D         Uniform           LL Defl inch         0.127 (L/1225)         7'5 1/4"         0.433 (L/360)         0.290 (29%) L         L	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Shear       1816 lb       12'5 3/4"       9277 lb       0.196 (20%) 1.25D+1.5L       L         Perm Defl in.       0.058 (L/2669)       7'3 7/8"       0.433 (L/360)       0.130 (13%) D       Uniform         LL Defl inch       0.127 (L/1225)       7'5 1/4"       0.433 (L/360)       0.290 (29%) L       L	Moment	4654 ft-lb	9'8 1/2"	22724 ft-lb	0.205 (20%)	1.25D+1.5L	L
Perm Defl in. 0.058 (L/2669) 7'3 7/8" 0.433 (L/360) 0.130 (13%) D Uniform LL Defl inch 0.127 (L/1225) 7'5 1/4" 0.433 (L/360) 0.290 (29%) L L	Unbraced	4654 ft-lb	9'8 1/2"	19392 ft-lb	0.240 (24%)	1.25D+1.5L	L
LL Defl inch 0.127 (L/1225) 7'5 1/4" 0.433 (L/360) 0.290 (29%) L L	Shear	1816 lb	12'5 3/4"	9277 lb	0.196 (20%)	1.25D+1.5L	L
	Perm Def	in. 0.058 (L/2669)	7'3 7/8"	0.433 (L/360)	0.130 (13%)	D	Uniform
TL Defl inch 0.186 (L/840) 7'4 13/16" 0.649 (L/240) 0.290 (29%) D+L L	LL Defl in	ch 0.127 (L/1225)	7'5 1/4"	0.433 (L/360)	0.290 (29%)	L	L
	TL Defl in	ch 0.186 (L/840)	7'4 13/16"	0.649 (L/240)	0.290 (29%)	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 braced at bearings.
- 5 Bottom braced at bearings.
- 6 Lateral slenderness ratio based on full section width.

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

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

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



U Lateral	Sicilide Hess rand based	on full section width.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 9-7-10	(Span)0-6-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Tie-In	0-0-0 to 0-3-0	(Span)0-7-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
3	Tie-In	0-3-0 to 13-7-15	(Ѕрап)0-9-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
4	Part. Uniform	9-8-8 to 13-2-8		Тор	90 PLF	240 PLF	0 PLF	0 PLF		
5	Point	9-8-8		Far Face	116 lb	299 lb	0 lb	0 lb	F1	
	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.

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 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







Page 1 of 2

**EWP Studio** Simpson Strong-Tie® Component Solutions™ Client: Project: **GREEN YORK HOMES** 

Address:

Date:

5/31/2018

Designer: RCO Job Name: LIANA 2 (ELEV.1)

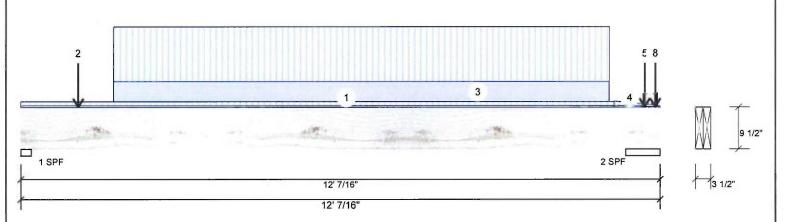
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor



### **Unfactored Reactions UNPATTERNED Ib (Uplift)** Member Information Floor (Residential) Application:

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

15 PSF

LSD Design Method: NBCC 2010 / OBC 2012 **Building Code:** Load Sharing: No

Snow Wind Live Dead Brg 1545 622 0 0 2 1762 732 0

Not Checked Deck: Vibration: Not Checked

> Bearings and Factored Reactions Cap. React D/L lb Ld. Comb. Bearing Length Total Ld. Case

> > 3094 L

3559 L

1 - SPF 2.375" 61% 777 / 2317 2 - SPF 7.754" 21% 915 / 2643 1.25D+1.5L 1.25D+1.5L

### Analysis Results

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	9242 ft-lb	5'9 9/16"	22724 ft-lb	0.407 (41%)	1.25D+1.5L	L
Unbraced	9242 ft-lb	5'9 9/16"	20195 ft-lb	0.458 (46%)	1.25D+1.5L	L
Shear	3271 lb	11 1/8"	9277 lb	0.353 (35%)	1.25D+1.5L	L
Perm Defl in.	0.092 (L/1482)	5'9 9/16"	0.377 (L/360)	0.240 (24%)	D	Uniform
LL Defl inch	0.229 (L/594)	5'9 9/16"	0.377 (L/360)	0.610 (61%)	L	L
TL Defl inch	0.320 (L/424)	5'9 9/16"	0.566 (L/240)	0.570 (57%)	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.
- ratio based on full section width

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

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

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



/ Lateral s	slenderness ratio based	on full section width.							S1St-	
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 11-2-3	(Span)1-0-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Point	1-0-15		Far Face	124 lb	332 lb	0 lb	0 lb	J5	
3	Part. Uniform	1-8-15 to 11-0-15		Far Face	101 PLF	270 PLF	0 PLF	0 PLF		
4	Tie-In	11-2-3 to 12-0-7	(Span)1-1-0 to 0-2-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
5	Point	11-8-15		Far Face	48 lb	128 lb	0 lb	0 lb	J5	
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

# 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 1.

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

APA: PR-L318





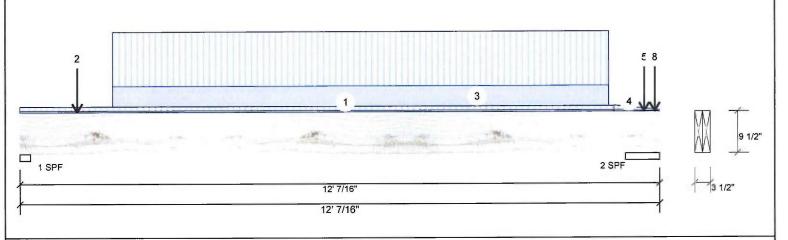


Job Name: LIANA 2 (ELEV.1)

Project #:

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

Level: Ground Floor



Continued from	ontinued from page 1									
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
6	Point	11-11-5		Тор	16 lb	34 lb	0 lb	0 lb	J4	
7	Point	11-11-5		Тор	20 lb	54 lb	0 lb	d1 0	J5	
8	Point	11-11-5		Тор	22 lb	0 lb	0 lb	0 lb	Wall Self Weight	
	Self Weight				8 PLF					

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

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

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

Handling & Installation

andling & installation
LVL beams must not be cut or drilled
Refer to manufacturer's product information
regarding installation requirements, multi-ply
festening 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 1.

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

APA: PR-L318



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





Page 2 of 2

Client: Project: Address: **GREEN YORK HOMES** 

Date:

5/31/2018

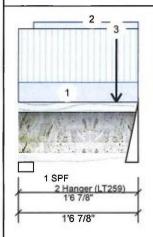
Designer: RCO

Job Name: LIANA 2 (ELEV.1)

Project #:

9.500" - PASSED F5-A NJH

Level: Ground Floor



9 1/2"

Page 1 of 1

-	-					- •	
n	л	Om	ber	Into	PHOS	ATI O	

Туре:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	
Floor Live:	40 PSF

15 PSF

Application: Design Method:

**Building Code:** 

Deck: Vibration: Floor (Residential)

NBCC 2010 / OBC 2012

Load Sharing:

Not Checked Not Checked

# **Unfactored Reactions UNPATTERNED Ib (Uplift)**

Brg	Live	Dead	Snow	Wind	
1	65	31	0	0	
2	135	67	0	0	

# **Bearings and Factored Reactions**

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	9%	39 / 98	136	L	1.25D+1.5L
2 - Hanger	2.000"	18%	84 / 202	286	L	1.25D+1.5L

# **Analysis Results**

Dead:

Г	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case	
l	Moment	52 ft-lb	1' 1/8"	3830 ft-lb	0.014 (1%)	1.25D+1.5L	L	
ı	Unbraced	52 ft-lb	1' 1/8"	3779 ft-lb	0.014 (1%)	1.25D+1.5L	L	
ı	Shear	272 lb	1'5 5/8"	1580 lb	0.172 (17%)	1.25D+1.5L	L	
	Perm Defl in.	0.000 (L/56622)	11 7/8"	0.044 (L/360)	0.010 (1%)	D	Uniform	
	LL Defl inch	0.001 (L/28154)	11 7/8"	0.044 (L/360)	0.010 (1%)	L	L	
	TL Defl inch	0.001 (L/18804)	11 7/8"	0.067 (L/240)	0.010 (1%)	D+L	L	

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

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

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



### **Design Notes**

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 1-6-14	(Span)3-2-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Part. Uniform	0-2-6 to 1-6-14		Тор	8 PLF	0 PLF	0 PLF	0 PLF		
3	Point	1-3-7		Near Face	49 lb	99 lb	0 lb	0 lb	J2	

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the deelign 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
 Use to be treated with fire retardant or corrosive

### chemicals

Handling & Installation

- andling & installation

  Lioist flanges must not be out or drilled

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

  Damaged Lioist must not be used

  Design assumes top flange to be laterally restrained
  by attached sheathing or as specified in engineering
  notes.
- 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 provide proper drainage to prevent

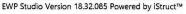
Manufacturer Info

Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario

Canada L4A 7X4 905-642-4400





Client:

Address:

Project:

**GREEN YORK HOMES** 

5/31/2018

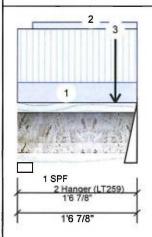
Designer: RCO

Job Name: LIANA 2 (ELEV.1)

Project #:

9.500" - PASSED NJH

Level: Ground Floor



9 1/2"

145-1

Page 1 of 1

V	1	em	ber	Infor	mation

Туре:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
Conoralland	

General Load Floor Live: 40 PSF 15 PSF Dead:

Application:

Vibration:

**Building Code:** 

Floor (Residential) Design Method: LSD

NBCC 2010 / OBC 2012

Not Checked

Load Sharing: Deck: Not Checked

# Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	vvina	
1	63	30	0	0	
2	120	59	0	0	

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF	2.375"	8%	37 / 94	131	L	1.25D+1.5L	
2 - Hanger	2.000"	16%	74 / 180	254	L	1.25D+1.5L	

# **Analysis Results**

	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
ı	Moment	48 ft-lb	11 11/16"	3830 ft-lb	0.013 (1%)	1.25D+1.5L	L
l	Unbraced	48 ft-lb	11 11/16"	3779 ft-lb	0.013 (1%)	1.25D+1.5L	L
	Shear	240 lb	1'5 5/8"	1580 lb	0.152 (15%)	1.25D+1.5L	L
	Perm Defl in.	0.000 (L/61792)	11 7/16"	0.044 (L/360)	0.010 (1%)	D	Uniform
	LL Defl inch	0.001 (L/30562)	11 1/2"	0.044 (L/360)	0.010 (1%)	L	L
	TL Defl inch	0.001 (L/20448)	11 1/2"	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 Top flange unbraced.
- 4 Bottom flange braced at bearings.

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	•
1	Tie-In	0-0-0 to 1-6-14	(Span)3-2-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Part. Uniform	0-2-6 to 1-6-14		Тор	8 PLF	0 PLF	0 PLF	0 PLF		
2	Daint	427		C C	40 lb	00.16	0.16	O.Ih	10	

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

### Handling & Installation

- Installation

  I. Jloist flanges must not be cut or drilled

  Refer to latest copy of the I.Joist product information details for framing details, stiffener tables, web hole chart, bridging details, mutti-ply fasterning details and handling/erection details

  Damaged Uniots 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

Manufacturer Info

Nascor by Kott





Client: Project: Address: **GREEN YORK HOMES** 

Date: 5/31/2018

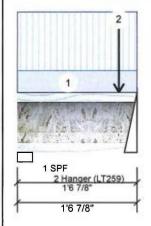
RCO Designer:

LIANA 2 (ELEV.1) Job Name:

Project #:

9.500" - PASSED F5-C NJH

Level: Ground Floor



9 1/2"

Page 1 of 1

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Туре:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	
Floor Live:	40 PSF

15 PSF

Application:

Floor (Residential)

Design Method: **Building Code:** NBCC 2010 / OBC 2012 Load Sharing:

Deck: Vibration: Not Checked Not Checked

# **Unfactored Reactions UNPATTERNED Ib (Uplift)**

Live	Dead	Snow	Wind
59	22	0	0
115	44	0	0
	59	59 22	59 22 0

# **Bearings and Factored Reactions**

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF		7%	28 / 88	116	L	1.25D+1.5L
2 -	2.000"	14%	55 / 173	227	L	1.25D+1.5L
Hanger						

### **Analysis Results**

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	39 ft-lb	11"	3830 ft-lb	0.010 (1%)	1.25D+1.5L	L
Unbraced	39 ft-lb	11"	3779 ft-lb	0.010 (1%)	1.25D+1.5L	L
Shear	214 lb	1'5 5/8"	1580 lb	0.135 (14%)	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/35261)	10 7/8"	0.044 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.001 (L/25598)	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 Top flange unbraced.
- 4 Bottom flange braced at bearings.

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-6-14	(Span)3-2-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1_4_0		Near Face	28 lb	73 lb	0.1b	Olb	12

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

- Anoling & installation
  Lioist langes must not be cut or drilled
  Refer to latest copy of the Lioist 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 sheathing or as specified in engineering
  notes.

- Provide lateral support at bearing points to avoid lateral displacement and rotation
   Wob stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
   For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Nascor by Kott





Client:

Address:

**GREEN YORK HOMES** Project:

Date:

5/31/2018

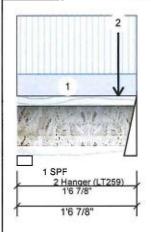
Designer: RCO

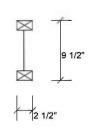
Job Name: LIANA 2 (ELEV.1)

Project #:

9.500" - PASSED F5-D NJH

Level: Ground Floor





Page 1 of 1

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ı.	, .	CILI	UCI	11110	IIIII		81

Type: Girder Plies: 1 Moisture Condition: Dry							
Туре:	Girder						
Plies:	1						
Moisture Condition:	Dry						
Deflection LL:	360						
Deflection TL:	240						
Importance:	Normal						
General Load							

40 PSF Floor Live: 15 PSF Dead:

Application: Design Method:

**Building Code:** 

Vibration:

Floor (Residential) LSD

NBCC 2010 / OBC 2012

Load Sharing: Deck:

Not Checked Not Checked

# **Unfactored Reactions UNPATTERNED Ib (Uplift)**

Brg	Live	Dead	Snow	Wind
1	59	22	0	0
2	118	44	0	0

# **Bearings and Factored Reactions**

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	7%	28 / 89	116	L	1.25D+1.5L
2 - Hanger	2.000"	15%	55 / 177	231	L	1.25D+1.5L

### **Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	39 ft-lb	11 1/16"	3830 ft-lb	0.010 (1%)	1.25D+1.5L	L
Unbraced	39 ft-lb	11 1/16"	3779 ft-lb	0.010 (1%)	1.25D+1.5L	L
Shear	218 lb	1'5 5/8"	1580 lb	0.138 (14%)	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/34841)	10 15/16"	0.044 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.001 (L/25376)	10 15/16"	0.067 (L/240)	0.010 (1%)	D+L	L

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

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

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



# **Design Notes**

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

7 0000	in hange braces at bearing	٥,							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-6-14	(Span)3-2-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-4-0		Far Face	28 lb	76 lb	0 lb	0 lb	J2

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

### Handling & Installation

- . Joist flanges must not be cut or drilled . Refer to latest copy of the Joist product information details for framing details, stiffener tables, web hole chart, bridging details, must jury fastening details and handling/erection details . Damaged Joists 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

### Manufacturer Info

Nascor by Kott



Kott Lumber Company L4A 7X4 905-642-4400





Client: Project: Address: **GREEN YORK HOMES** 

5/31/2018

Designer: RCO

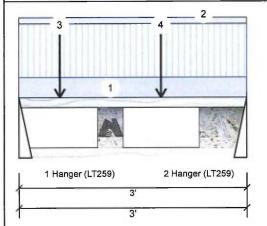
Job Name: LIANA 2 (ELEV.1)

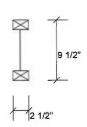
Project #:

Date:

9.500" - PASSED F6-A NJH

Level: Ground Floor





Wind

0

0

Page 1 of 1

Туре:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Definition TI.	240

Member Information

Deflection TL: 240 importance: Normal General Load

40 PSF Floor Live: 15 PSF Dead:

Application: Floor (Residential)

LSD

Design Method: **Building Code:** 

NBCC 2010 / OBC 2012

1

Load Sharing: Not Checked Deck:

Vibration: Not Checked

Unfactore	ed Reactions	UNPATTER	NED Ib (Uplift)
Brg	Live	Dead	Snow

2	215	105	0	0

135

# Bearings and Factored Reactions

274

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	37%	169 / 411	581		1.25D+1.5L
2 - Hanger	2.000"	29%	132 / 323	455	L	1.25D+1.5L

Analysis Results Location Allowed Comb. Case Analysis Actual Capacity Moment 420 ft-lb 1'10 7/16" 3830 ft-lb 0.110 (11%) 1.25D+1.5L L 0.123 (12%) 1.25D+1.5L L 420 ft-lb 1'10 7/16" 3411 ft-lb Unbraced 1 1/4" 1580 lb 0.363 (36%) 1.25D+1.5L L Shear 573 lb Perm Defl in. 0.003 1'10 7/16" 0.093 (L/360) 0.030 (3%) D Uniform (L/12262) LL Defl inch 0.006 (L/6011) 1'10 7/16" 0.093 (L/360) 0.060 (6%) L L 0.008 (L/4033) 1'10 7/16" 0.140 (L/240) 0.060 (6%) D+L TL Defl inch

**Design Notes** 

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

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

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

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



4 50000	ili lialige braceu at bearings.	•								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 3-0-0	(Span)1-8-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Part. Uniform	0-0-0 to 3-0-0		Тор	4 PLF	0 PLF	0 PLF	0 PLF		
3	Point	0-6-7		Far Face	84 lb	169 lb	0 lb	0 lb	J3	
4	Point	1-10-7		Far Face	106 lb	217 lb	0 lb	0 lb	J3	

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
 Upoist not to be treated with fire retardant or corrosive

chemicals

### Handling & Installation

- andling & installation

  Joist flanges must not be cut or drilled
  Refer to latest copy of the Lioist product information
  details for framing details. siftener tables, web hole
  chart, bridging details, multi-ply fastening details and
  handlingle-rection details

  Damaged Lioists must not be used
  Design assumes top flange to be laterally restrained
  by attached sheathing or as specified in engineering
  notes.
- 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 provide proper drainage to prevent ponding

Manufacturer Info

Nascor by Kott







Client: Project: Address:

**GREEN YORK HOMES** 

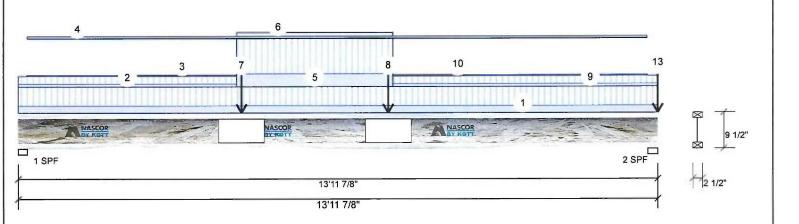
5/31/2018 Date:

> Designer: RCO LIANA 2 (ELEV.1) Job Name:

Project #:

9.500" - PASSED NJH F7-A

Level: Ground Floor



### **Unfactored Reactions UNPATTERNED Ib (Uplift)** Member Information Girder Live Dead Snow Type: Application: Floor (Residential) Brg Plies: Design Method: LSD 370 181 0 1 Moisture Condition: Dry NBCC 2010 / OBC 2012 **Building Code:** 2 533 273 Deflection LL: Load Sharing: Not Checked Deflection TL: 240 Deck: Importance: Vibration: Not Checked Normal General Load Floor Live: 40 PSE

**Bearings and Factored Reactions** Ld. Comb. Cap. React D/L lb Total Ld. Case Bearing Length 1 - SPF 2.375" 49% 226 / 555 781 L 1.25D+1.5L 1.25D+1.5L 2 - SPF 2.625" 72% 342 / 800 1141 L

### **Analysis Results**

Dead:

Г	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
l	Moment	3313 ft-lb	7'1"	3830 ft-lb	0.865 (87%)	1.25D+1.5L	L
	Unbraced	3313 ft-lb	7'1"	3323 ft-lb	0.997 (100%)	1,25D+1.5L	L
	Shear	774 lb	1 5/8"	1580 lb	0.490 (49%)	1.25D+1.5L	L
	Perm Defl in.	0.155 (L/1064)	6'11 3/8"	0.457 (L/360)	0.340 (34%)	D	Uniform
	LL Defl inch	0.315 (L/522)	6'11 3/8"	0.457 (L/360)	0.690 (69%)	L	L
	TL Defl inch	0.470 (L/350)	6'11 3/8"	0.685 (L/240)	0.690 (69%)	D+L	L

### **Design Notes**

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Top flange must be laterally braced at a maximum of 3' o.c.

3 Bottom flange braced at bearings

15 PSF

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

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

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



Wind

0

Page 1 of 2

O DOLLOITI III	ange bracea at bearing	J								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 13-11-14	(Span)0-11-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Tie-In	0-0-0 to 4-9-6	(Span)0-4-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
3	Part. Uniform	0-2-6 to 4-9-6		Тор	1 PLF	0 PLF	0 PLF	0 PLF		
4	Part. Uniform	0-2-6 to 13-9-2		Тор	2 PLF	0 PLF	0 PLF	0 PLF		
5	Tie-In	4-9-6 to 8-2-6	(Span)1-8-11 to 1-8-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
6	Part. Uniform	4-9-6 to 8-2-6		Тор	4 PLF	0 PLF	0 PLF	0 PLF		
7	Point	4-10-10		Near Face	59 lb	120 lb	0 lb	0 lb	F5	
Continued on p	page 2									

Calculated Structured Designs is responsible only of the Calculated Structure Designs is responsible only 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

- AUGUING & INStallation

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

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 that roofs provide proper drainage to prevent ponding



Nascor by Kott





Page 2 of 2

Client:

**GREEN YORK HOMES** 

Project: Address:

5/31/2018 Date:

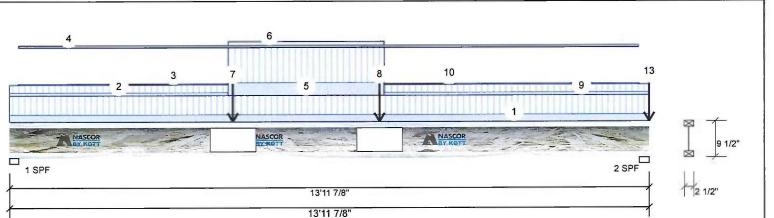
RCO Designer:

Job Name: LIANA 2 (ELEV.1)

Level: Ground Floor

Project #:

### 9.500" - PASSED F7-A NJH



Continued from	m page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Point	8-1-2		Near Face	67 lb	135 lb	0 lb	0 lb	F5
9	Tie-In	8-2-6 to 13-11-14	(Span)0-4-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
10	Part. Uniform	8-2-6 to 13-9-2		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
11	Point	13-11-14		Тор	35 lb	91 lb	0 lb	0 lb	J5
12	Point	13-11-14		Тор	41 lb	93 lb	0 lb	0 lb	J5
13	Point	13-11-14		Тор	27 lb	0 lb	0 lb	0 lb	Wall Self Weight

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

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

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
 IJoist not to be treated with fire retardant or corrosive

chemicals

### Handling & Installation

- anolling & Installation
  Libel flanges must not be cut or drilled
  Refer to latest copy of the IJoist product information
  details for framing details, suffener tables, web hole
  chart, bridging details, multi-ply fastening details and
  handling/erection details
  Damaged IJoists must not be used
  Design assumes top flange to be laterally restrained
  by attached sheathing or as specified in engineering
  notes. 1.

- 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

Manufacturer Info

Nascor by Kott







Page 1 of 1

Client:

Address:

**GREEN YORK HOMES** Project:

Date: 5/31/2018

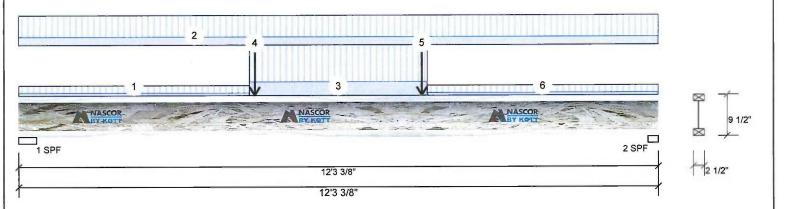
RCO Job Name: LIANA 2 (ELEV.1)

Project #:

Designer:

9.500" - PASSED F7-B NJH

Level: Ground Floor



Member Inform	nation			Unfactore	d React	ions U	NPATTERNI	ED lb (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snow	Wind
Plies:	1	Design Method:	LSD	1	331		125	0	0
Moisture Condition	: Dry	Building Code:	NBCC 2010 / OBC 2012	2	324		122	0	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 Fac	tored R	Reactions		
Dead:	15 PSF			Bearing L	.ength	Cap.	React D/L lb	Total Ld. Cas	e Ld. Comb.
				1 - SPF 4	.125"	41%	156 / 496	652 L	1.25D+1.5L
				2-SPF 2	2.375"	40%	152 / 486	638 L	1.25D+1.5L

**Analysis Results** 

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2390 ft-lb	6'2 3/4"	3830 ft-lb	0.624 (62%)	1.25D+1.5L	L
Unbrace	d 2390 ft-lb	6'2 3/4"	2404 ft-lb	0.994 (99%)	1.25D+1.5L	L
Shear	637 lb	3 3/8"	1580 lb	0.403 (40%)	1.25D+1.5L	L
Perm De	efl in. 0.072 (L/1978)	6'2 1/2"	0.395 (L/360)	0.180 (18%)	D	Uniform
LL Defl i	nch 0.191 (L/744)	6'2 9/16"	0.395 (L/360)	0.480 (48%)	Ĺ	L
TL Defl i	nch 0.263 (L/541)	6'2 9/16"	0.593 (L/240)	0.440 (44%)	D+L	L

**Design Notes** 

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Top flange must be laterally braced at a maximum of 4'9" o.c.

3 Bottom flange braced at bearings.

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

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

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



2 DOMOUL	mange braced at bearing	5.				. Onti Loru			
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-5-3	(Span)0-4-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 12-3-6	(Span) 0-11-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	4-5-3 to 7-10-3	(Span)1-8-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	4-6-7		Far Face	44 lb	115 lb	0 lb	0 1b	F5
5	Point	7-8-15		Far Face	44 lb	118 lb	0 lb	0 lb	F5
6	Tie-In	7-10-3 to 12-3-6	(Span)0-4-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design onteria 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

chemicals

# Handling & Installation

- andling & Installation

  Libit flanges must not be cut or d'illed
  Refer to latest copy of the I/Dist product information
  details for framing details, stiffener tables, web hole
  chart, bridging details, multiply fastening details and
  handling/erection details
  Damaged I/Dists must not be used
  Design assumes top flange to be laterally restrained
  by attached sheathing or as specified in engineering
  notes.

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 roots provide proper drainage to prevent ponding

Manufacturer Info

Nascor by Kott





L	5 Bottom flange	braced at bearings.								
Γ	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
l	1	Tie-In	0-0-0 to 1-9-6	(Span)3-5-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
l	2	Tie-In	0-0-0 to 10-3-12	(Span)1-3-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
l	3	Part. Uniform	0-2-6 to 1-9-6		Тор	9 PLF	0 PLF	0 PLF	0 PLF	
l	4	Part. Uniform	0-2-6 to 9-8-15		Тор	3 PLF	0 PLF	0 PLF	0 PLF	
l	5	Point	1-8-2		Far Face	105 lb	215 lb	0 lb	0 lb	F6
l	6	Tie-In	1-9-6 to 10-3-12	(Span)1-4-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	7	Part, Uniform	1-9-6 to 9-8-15		Тор	3 PLF	0 PLF	0 PLF	0 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 inte application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 IJoist not to be treated with fire retardant or corre

chemicals

### Handling & Installation

- Andling & Installation

  Lidel tanges 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 fastoning 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.

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

### Manufacturer Info

Nascor by Kott





Client: Project: Address:

**GREEN YORK HOMES** 

5/31/2018 Date:

> Designer: Job Name: LIANA 2 (ELEV.1)

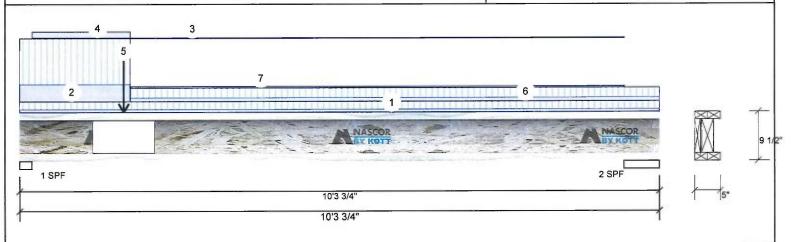
Project #:

9.500" 2-Ply - PASSED F8-B NJH

Level: Ground Floor

PAGE ZU UF 3Z

Page 1 of 1



Member Info	rmation			Unfacto	red Reactions	S UNPATTER	NED lb (Uplif	t)	
Туре:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind	
Plies:	2	Design Method:	LSD	1	451	220	0	0	
Moisture Conditi	ion: Dry	Building Code:	NBCC 2010 / OBC 2012	2	194	93	0	0	
Deflection LL:	360	Load Sharing:	No						
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal	Vibration:	Not Checked						
General Load							•		

**Bearings and Factored Reactions** 15 PSF Cap. React D/L lb Dead: Bearing Length 1 - SPF 2.375" 30% 276 / 676 2 - SPF 6.875" 13% 116 / 291

**Analysis Results** 

Floor Live:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1286 ft-lb	3' 1/2"	7660 ft-lb	0.168 (17%)	1.25D+1.5L	L
Unbraced	1286 ft-lb	3' 1/2"	1290 ft-lb	0.997 (100%)	1.25D+1.5L	L
Shear	930 lb	1 5/8"	3160 lb	0.294 (29%)	1.25D+1.5L	L
Perm Defl in.	0.017 (L/6925)	4'6"	0.322 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.034 (L/3400)	4'6"	0.322 (L/360)	0.110 (11%)	L	L
TL Defl inch	0.051 (L/2280)	4'6"	0.483 (L/240)	0.110 (11%)	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.

40 PSF

4 Top flange must be laterally braced at a maximum of 9'7" o.c.

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

Unfactored Reactions UNPATTERNED lb (Uplift)

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

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



Ld. Comb.

1.25D+1.5L 1.25D+1.5L

Total Ld. Case

951 L

407 L

5 Bo	ttom flange braced at bearings								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-3-12	(Span)0-7-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-6	(Span)3-5-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-6 to 9-9-0		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-6 to 1-9-6		Тор	9 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-8-2		Near Face	135 lb	274 lb	0 lb	0 lb	F6
6	Tie-In	1-9-6 to 10-3-12	(Span)0-8-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-9-6 to 9-9-0		Тор	2 PLF	0 PLF	0 PLF	0 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

chemicals

### Handling & Installation

- andling & 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, multiply fastening details and
  handling/erection details
  Damaged IJoists 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

### Manufacturer Info

Nascor by Kott



Page 1 of 1

**EWP Studio** Simpson Strong-Tie® Component Solutions™

Client: Project:

Address:

**GREEN YORK HOMES** 

5/31/2018

Designer: RCO

Job Name: LIANA 2 (ELEV.1)

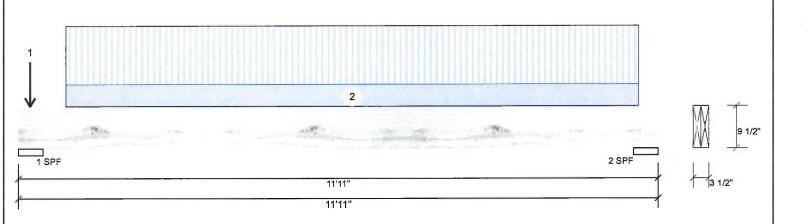
Project #:

Date:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



Туре:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	1378	565	0	0
Moisture Condition	: Dry	Building Code:	NBCC 2010 / OBC 2012	2	1362	559	0	0
Deflection LL:	360	Load Sharing:	No					100
Deflection TL:	240	Deck:	Not Checked					
Importance:	Normal	Vibration:	Not Checked					
General Load								
Floor Live:	40 PSF			Bearings a	and Factored	Reactions	100	
Dead:	15 PSF			Bearing L	ength Ca	p. React D/L lb	Total Ld. Case	Ld. Comb.
				1 - SPF 5	.500" 23	% 706 / 2068	2774 L	1,25D+1.5L
				2-SPF 5	.500" 23	% 699 / 2043	2742 L	1.25D+1.5L

	Ana	lysis	Resu	Its
--	-----	-------	------	-----

Member Information

Г	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	7560 ft-lb	5'11 5/8"	22724 ft-lb	0.333 (33%)	1.25D+1.5L	L
	Unbraced	7560 ft-lb	5'11 5/8"	20280 ft-lb	0.373 (37%)	1.25D+1.5L	L
	Shear	2345 lb	1'2 1/4"	9277 lb	0.253 (25%)	1.25D+1.5L	L
	Perm Defl in.	0.074 (L/1812)	5'11 9/16"	0.371 (L/360)	0.200 (20%)	D	Uniform
	LL Defl inch	0.180 (L/740)	5'11 9/16"	0.371 (L/360)	0.490 (49%)	L	L
	TL Defl inch	0.254 (L/525)	5'11 9/16"	0.556 (L/240)	0.460 (46%)	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.

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

**Unfactored Reactions UNPATTERNED Ib (Uplift)** 

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

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



/ La	ateral sienderness ratio based or	full section width.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Point	0-2-10		Тор	52 lb	138 lb	dl 0	0 lb	J5	
2	Part. Uniform	0-10-10 to 11-6-10		Тор	92 PLF	244 PLF	0 PLF	0 PLF		
	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.

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 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

APA: PR-L318







Client: Project: Address: **GREEN YORK HOMES** 

Date: 5/31/2018

Designer: RCO

Job Name: LIANA 2 (ELEV.1)

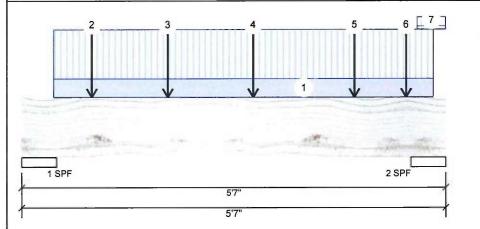
Project #:

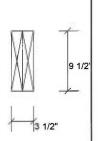
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second 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	

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	1315	519	0	0
2	1964	809	0	0

# **Bearings and Factored Reactions**

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	22%	649 / 1973	2622	L	1.25D+1.5L
2 - SPF	5.500"	33%	1012 / 2947	3959	L	1.25D+1.5L

# Analysis Results

Dead:

Ι-	,	•••					
Г	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	3183 ft-lb	3' 9/16"	22724 ft-lb	0.140 (14%)	1.25D+1.5L	L
	Unbraced	3183 ft-lb	3' 9/16"	22724 ft-lb	0.140 (14%)	1.25D+1.5L	L
	Shear	3768 lb	4'4 3/4"	9277 lb	0.406 (41%)	1.25D+1.5L	L
	Perm Defl in.	0.007 (L/7855)	2'10 1/8"	0.160 (L/360)	0.050 (5%)	D	Uniform
	LL Defl inch	0.019 (L/3082)	2'10 1/8"	0.160 (L/360)	0.120 (12%)	L	L
	TL Defl inch	0.026 (L/2214)	2'10 1/8"	0.240 (L/240)	0.110 (11%)	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 braced at bearings.
- 5 Bottom braced at bearings.
- 6 Lateral slenderness ratio based on full section width.

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Part. Uniform	0-5-1 to 5-5-1		Far Face	104 PLF	276 PLF	0 PLF	0 PLF		
2	Point	0-11-1		Near Face	112 lb	292 lb	0 lb	0 lb	J5	
3	Point	1-11-1		Near Face	105 lb	281 lb	0 lb	0 lb	J5	
4	Point	3-0-9		Near Face	123 lb	327 lb	0 lb	0 lb	J5	
5	Point	4-4-9		Near Face	100 lb	268 lb	0 lb	0 lb	J5	
6	Point	5-0-12		Near Face	319 lb	713 lb	0 lb	0 lb	F4	

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

# 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 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

APA: PR-L318

Kott Lumber Company L4A 7X4 905-642-4400





Project: Address:

Designer: RCO

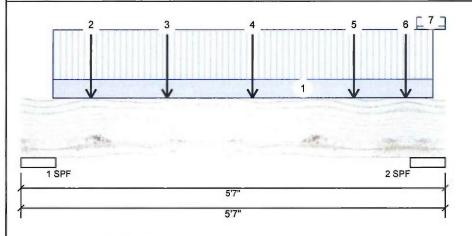
Job Name: LIANA 2 (ELEV.1)

Project #:

F10-A Forex 2.0E-3000Fb LVL 1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor



9 1/2

Page 2 of 2

.Continued from page 1

ID Load Type 7 Tie-In

Location 5-2-8 to 5-7-0

Trib Width (Span)2-6-3

Side Top

Dead 15 PSF

Live 40 PSF

Snow 0 PSF Wind Comments

0 PSF

Self Weight

8 PLF

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

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

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

### 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

  Lesign 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





Address:

Date:

5/31/2018

Designer: **RCO** LIANA 2 (ELEV.1) Job Name:

Project #:

Component Solutions™ Forex 2.0E-3000Fb LVL

Simpson Strong-Tie®

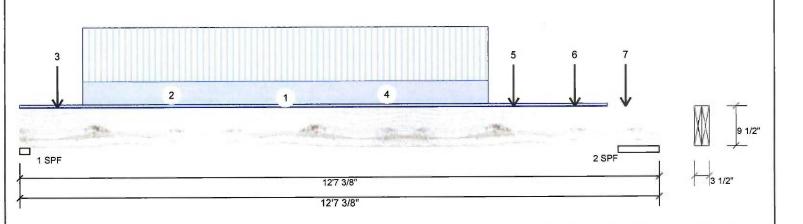
1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor

FAGE ZU UF JZ

Page 1 of 2



### **Unfactored Reactions UNPATTERNED Ib (Uplift)** Member Information Snow Wind Live Dead Girder Floor (Residential) Brg Type: Application: 722 0 Plies: 2 Design Method: LSD 1567 0 1 NBCC 2010 / OBC 2012 Moisture Condition: Dry **Building Code:** 0 0 2 1790 804 Deflection LL: Load Sharing: Not Checked Deflection TL: Deck: Importance: Vibration: Not Checked Normal General Load Bearings and Factored Reactions Floor Live: 40 PSF 15 PSF Cap. React D/L lb Total Ld. Case Ld. Comb. Dead: Bearing Length 3253 1 1.25D+1.5L 1 - SPF 2.375" 64% 902 / 2351 2 - SPF 9.714" 18% 1005 / 2685 3690 L 1.25D+1.5L

**Analysis Results** 

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	9822 ft-lb	6'	22724 ft-lb	0.432 (43%)	1.25D+1.5L	L
Unbraced	9822 ft-lb	6'	20006 ft-lb	0.491 (49%)	1.25D+1.5L	L.
Shear	3223 lb	11 1/8"	9277 lb	0.347 (35%)	1.25D+1.5L	L
Perm Defl in.	0.115 (L/1224)	6' 1/16"	0.391 (L/360)	0.290 (29%)	D	Uniform
LL Defl inch	0.251 (L/561)	6'	0.391 (L/360)	0.640 (64%)	L	L
TL Defl inch	0.366 (L/385)	6' 1/16"	0.587 (L/240)	0.620 (62%)	D+L	L

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

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

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



### **Design Notes**

- 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

O Lateral Sie	cudettiess tatio pased	off full Section widen.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 11-7-2	(Span)0-6-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-2-7 to 11-1-5		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-8-15		Far Face	104 lb	238 lb	0 lb	0 lb	J5
4	Part. Uniform	1-2-15 to 9-2-15		Far Face	114 PLF	266 PLF	0 PLF	0 PLF	
5	Point	9-8-15		Far Face	128 lb	294 lb	0 lb	0 lb	J5
6	Point	10-11-7		Far Face	123 lb	292 lb	0 lb	0 lb	J5

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

### 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 Reams must not be used
- Danaged 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

APA: PR-L318





Client: **GREEN YORK HOMES** Date: 5/31/2018 Page 2 of 2 **EWP Studio** Project: Designer: RCO Simpson Strong-Tie® Address: Job Name: LIANA 2 (ELEV.1) Component Solutions™ Project #: Level: Second Floor Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED 3 5 6 2 4 1 SPF 2 SPF 12'7 3/8" 12'7 3/8"

.Continued from page 1

ID Load Type 7 Point

Self Weight

11-11-7

Location Trib Width

Side Far Face Dead 105 lb

Live 281 lb Snow 0 lb

Wind Comments 0 lb J5

8 PLF

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

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

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 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







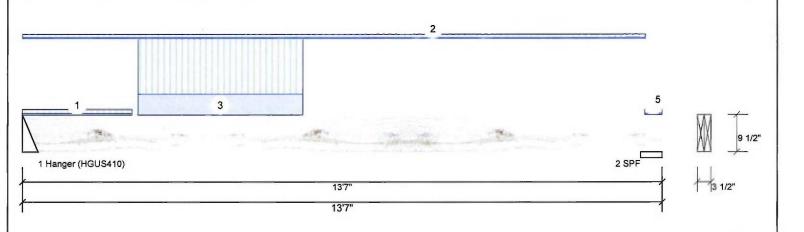
Simpson Strong-Tie® Address:

Component Solutions™

Job Name: LIANA 2 (ELEV.1)

Project #:

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



Hanger

2 - SPF 5.500"

Member Info	rmation			Unfacto	red Reac	tions U	INPATTERN	ED lb (Uplift)	
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	713		319	0	0
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	357		186	0	0
Deflection LL:	360	Load Sharing:	No	100					
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal	Vibration:	Not Checked						
General Load					-				
Floor Live:	40 PSF			Bearings	and Fac	tored	Reactions		
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total Ld. Case	Ld. Comb.
				1-	4.000"	14%	398 / 1070	1468 L	1.25D+1.5L

Analysis Res	sults					
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4658 ft-lb	5' 1/8"	22724 ft-lb	0.205 (20%)	1.25D+1.5L	L
Unbraced	4658 ft-lb	5' 1/8"	19429 ft-lb	0.240 (24%)	1.25D+1.5L	L
Shear	1393 lb	1' 3/4"	9277 lb	0.150 (15%)	1.25D+1.5L	L
Perm Defl in.	0.058 (L/2674)	6'2 5/8"	0.431 (L/360)	0.130 (13%)	D	Uniform
LL Defl inch	0.128 (L/1212)	6'1 5/16"	0.431 (L/360)	0.300 (30%)	L	L
TL Defl inch	0.186 (L/834)	6'1 3/4"	0.646 (L/240)	0.290 (29%)	D+L	L

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

6%

233 / 535

768 L

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

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



1.25D+1.5L

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.
- 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.

Г	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
ı	1	Tie-In	0-0-0 to 2-3-14	(Span)0-10-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
ı	2	Tie-In	0-0-0 to 13-2-12	(Span)0-8-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
l	3	Part. Uniform	2-5-7 to 5-11-7		Тор	90 PLF	240 PLF	0 PLF	0 PLF	
	4	Tie-In	13-2-10 to 13-7-0	(Span)0-10-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	5	Tie-In	13-2-12 to 13-7-0	(Span)0-5-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
		Self Weight				8 PLF				

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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 information
regarding installation requirements, multi-ply
fastening details, beam strength values, and code
approvals

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





Client: Project:

Address:

**GREEN YORK HOMES** 

Date:

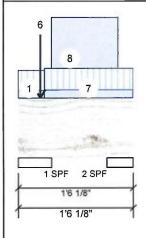
5/31/2018

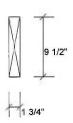
RCO Designer:

Job Name: LIANA 2 (ELEV.1)

Project #:

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





Page 1 of 2

Member	Information			Unfacto	red Reaction	s UNPATTER	NED lb (Uplift)	1
_	01.1	A 10 10 11	FI (D!-l4:-1)	15	1.5	Dood	Constitution	Т

Туре:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	
Floor Live:	40 PSF
Dead:	15 PSF

Floor (Residential) Application: LSD Design Method: NBCC 2010 / OBC 2012 **Building Code:** Load Sharing: No Deck: Not Checked Vibration: Not Checked

Wind Dead Snow Brg Live 0 283 457 566 1 2 20 43 0 0

**Bearings and Factored Reactions** Bearing Length 1 - SPF 5.250"

2 - SPF 4.125"

Cap. React D/L lb Total Ld. Case 37% 571 / 991 1561 L

53 / 29

83 L

Ld. Comb. 1.25D+1.5S +0.5L

1.25D+1.5L

**Analysis Results** 

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	10 ft-lb	9 5/8"	7385 ft-lb	0.001 (0%)	1.4D	Uniform
Unbraced	10 ft-lb	9 5/8"	7385 ft-lb	0.001 (0%)	1.4D	Uniform
Shear	40 lb	5 1/4"	3015 lb	0.013 (1%)	1.4D	Uniform
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		

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2%

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

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



**Design Notes** 

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

4 Bottom	braced at bearings.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)1-3-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-3-8		Тор	10 lb	0 lb	23 lb	0 lb	
3	Point	0-3-8		Тор	18 lb	0 lb	0 lb	0 lb	Wall Self Weight
4	Point	0-3-8		Тор	386 lb	262 lb	537 lb	0 lb	F12 F12
5	Point	0-3-8		Тор	2 lb	0 lb	6 lb	0 lb	
6	Point	0-3-8		Тор	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
7	Tie-In	0-4-2 to 1-6-2	(Span)1-4-9	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
Continued 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

- 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 1.
- approves
  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 4. 5.

For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

APA: PR-L318



Kott Lumber Company 14 Anderson Blvd, Ontario





Client: Project:

Address:

GREEN YORK HOMES

Date:

5/31/2018

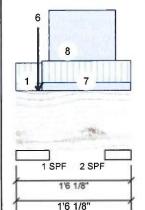
Designer: **RCO** 

LIANA 2 (ELEV.1) Job Name:

Project #:

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

Level: Second Floor



Page 2 of 2

.Continued from page 1

ID Load Type 8 Part. Uniform

Self Weight

Location Trib Width 0-5-4 to 1-3-12

Side Тор

Dead 64 PLF

Live 0 PLF Snow 0 PLF Wind Comments 0 PLF Wall Self Weight

4 PLF

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

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

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and leadings 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

LVI 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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex APA: PR-L318







Client: Project: Address: **GREEN YORK HOMES** 

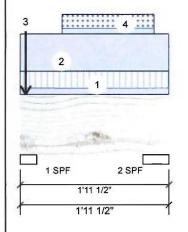
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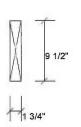
5/31/2018 RCO

Designer: Job Name: LIANA 2 (ELEV.2)

Project #:

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





Page 1 of 1

### **Unfactored Reactions UNPATTERNED Ib (Uplift)** Member Information

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			
Floor Live:	40 PSF		

Brg	Live	Dead	Snow	Wind
1	184	324	365	0
2	31	90	19	0

### **Bearings and Factored Reactions**

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF	2.625"	41%	406 / 639	1045	L	1.25D+1.5S +0.5L	
2-SPF	4.125"	4%	126 / 0	126	Uniform	1.4D	

### Analysis Results

Dead:

15 PSF

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	35 ft-lb	11 1/16"	7385 ft-lb	0.005 (0%)	1.4D	Uniform
Unbraced	35 ft-lb	11 1/16"	7285 ft-lb	0.005 (0%)	1.4D	Uniform
Shear	8 lb	10 5/8"	4638 lb	0.002 (0%)	1.25D+1.5S +0.5L	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%)		
TI Deflinch	0.000 (1/999)	0	999 000 (1/0)	0.000 (0%)		

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

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

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



### **Design Notes**

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

1 Doctom D	laced at bearings.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-11-8	(Span)1-5-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 1-11-8		Тор	64 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Point	0-0-14		Тор	248 lb	157 lb	355 lb	0 lb	F11 F11
4	Part. Uniform	0-6-10 to 1-9-2		Тор	10 PLF	0 PLF	24 PLF	0 PLF	
(3)	Self Weight				4 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

# 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 Bearns must not be used
Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation 5.

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

APA: PR-L318



Kott Lumber Company L4A 7X4 905-642-4400





Client:

**GREEN YORK HOMES** 

Project: Address: Date:

5/31/2018

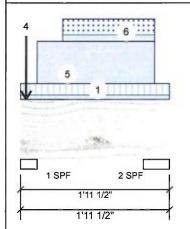
Designer: RCO

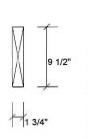
Job Name: LIANA 2 (ELEV.2)

Project #:

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

Level: Second Floor





Wind

0

0

Snow

370

19

Page 1 of 1

### Member Information Unfactored Reactions UNPATTERNED Ib (Uplift)

Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead
Plies:	1	Design Method:	LSD	1	173	318
Moisture Condition	: Dry	Building Code:	NBCC 2010 / OBC 2012	2	18	73
Deflection LL:	360	Load Sharing:	No			
Deflection TL:	240	Deck:	Not Checked	1		
Importance:	Normal	Vibration:	Not Checked			
General Load						
Floor Live:	40 PSF			Bearings a	and Fact	tored Reaction
Dead:	15 PSF			Bearing L	enath	Can React Da

Bearings	and	<b>Factored</b>	Reactions	

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF	2.625"	41%	398 / 642	1040	L	1.25D+1.5S +0.5L	
2 - SPF	4.125"	4%	102 / 0	102	Uniform	1.4D	

**Analysis Results** 

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	34 ft-lb	11 1/16"	7385 ft-lb	0.005 (0%)	1.4D	Uniform
Unbraced	34 ft-lb	11 1/16"	7285 ft-lb	0.005 (0%)	1.4D	Uniform
Shear	7 lb	10 5/8"	4638 lb	0.002 (0%)	1.25D+1.5S +0.5L	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%)		

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

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

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



# Design Notes

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

l	4 Bottom braced	at bearings.								
ĺ	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
l	1	Tie-In	0-0-0 to 1-11-8	(Span)0-10-9	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	2	Point	0-0-14		Тор	250 lb	157 lb	360 lb	0 lb	F11 F11
l	3	Point	0-0-14		Тор	5 lb	0 lb	0 lb	0 lb	Wall Self Weight
	4	Point	0-0-14		Тор	5 lb	0 lb	0 lb	0 lb	Wall Self Weight
l	5	Part. Uniform	0-2-10 to 1-9-2		Тор	64 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
١	6	Part. Uniform	0-6-10 to 1-9-2		Тор	10 PLF	0 PLF	24 PLF	0 PLF	
١		Self Weight				4 PLF				
1										

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

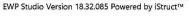
- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code 1.
- approvals
  Damaged Beams must not be used
  Design assumes top edge is laterally restrained
  Provide lateral support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

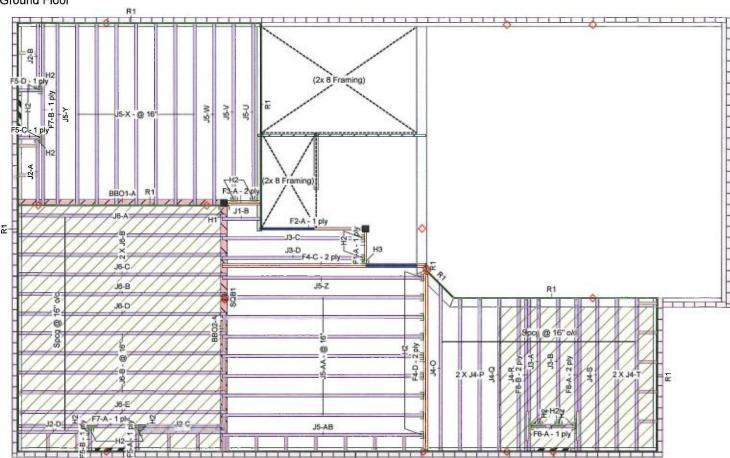
For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

Forex APA: PR-L318







### THIS CERTIFICATION IS TO CONFIRM THAT:

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- 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.

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







Load from Above Wall Wall Opening Norbord Rimboard Plus 1.125 X 9.5 NJH 9.5 Forex 2.0E-3000Fb LVL 1.75 X 9.5

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R
- 3. LVL CCMC -14056-R
- 4. CAN/CSA-O86-09
- 5. CCMC -12787-R APA PR-L310(C)

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

All work shall conform to the Onta Building Code O. Reg. 332/12 as amend: ARCHITECTURAL DRAWINGS:

CITY OF BRAMPTON BUILDING DIVISION REVIEWED MAR 0 5 2019

Ground Floor

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F4	Forex 2.0E-3000Fb LVL	1.75	9.5	2	2	4	14-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	9.5			1	8-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	4-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			1	4-0-0
Joist (	Flush)						
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F7	NJH	2.5	9.5			2	14-0-0
F8	NJH	2.5	9.5	2	2	4	12-0-0
F6	NJH	2.5	9.5			1	4-0-0
F5	NJH	2.5	9.5			4	2-0-0
J6	NJH	2.5	9.5			11	16-0-0
J5	NJH	2.5	9.5			20	14-0-0
J4	NJH	2.5	9.5			8	12-0-0
J3	NJH	2.5	9.5			4	10-0-0
J2	NJH	2.5	9.5			4	6-0-0
J1	NJH	2.5	9.5		7	1	4-0-0
Rim Bo	ard						
Labol	Description	Midth	Donth	Oh	Dline	Doo	Longth

Width Depth Qty Plies Pcs Length Label Description Norbord Rimboard 1.125 9.5 12 13 Plus 1.125 X 9.5 Blocking Label Description Qty Plies Pcs Length

Width Depth

2.5

Hanger

BLK1 NJH

					Beam/Girder	Supported Member
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	1	Unknown				

9.5 LinFt

4 10dx1 1/2

30 16d

### НЗ NOTES:

H2

25 LT259

1 HUS1.81/10

- 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
- . 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 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

JARDIN DESIGN GROUP INC. 64 Jardin Dr., Suite 3A, Vaughan, ON Date: Rev.1; May 22,2018 Project No: 17-55 Model: Liana 2

M-2057

FAGE 3 UF 32

Layout Name

Description

Created May 29, 2018 Builder

Sales Rep

Designer RCO

Shipping Project

Canada

L4A 7X4 905-642-4400 Job Path

Varies 29-0-0

2 10dx1 1/2

10 16d

Builder's Project

14 Anderson Blvd

Stouffville, Ontario

Ground Floor

Design Method

Deflection Joist

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

Decking

Thickness

Fastener

Vibration

Deck

Deflection Girder

Floor

Loads

Live

Dead

**Kott Lumber Company** 

D:\Users\rochavillo\WORK FROM

HOME\GREEN YORK HOMES \GRANELLI HOME CORP\MODELS

**LIANA 2/LIANA 2 ELEV 1/FLOOR** 

Building Code NBCC 2010 / OBC

LSD

2012

40

15

480

360

480

360

360

240

480

360

**OSB** 

3/4"

Nailed & Glued

LIANA 2 (ELEV.1&2) Design Method

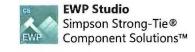
GRANELLI HOMES CORP. BRAMPTON, ONT.

**GREEN YORK HOMES** 

19-444490.000.00 KR.







EWP Studio Version 18.32.085 Powered by iStruct™

Second Floor

# J4-E J4-J F4-B - 2 ply J5-J J5-H J5-K J5-L M-M J5-M JB-N

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



Load from Above MelV Norbord Rimboard Plus 1.125 X 9.5 **NJH 9.5** Forex 2.0E-3000Fb LVL 1.75 X 9.5 (Dropped) Forex 2.0E-3000Fb LVL 1.75 X 9.5

- 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)

PAGE ZI UP 32 VL/LSL (Flush) Label Description Width Depth Qty Plies Pcs Length F4 9.5 2 2 1.75 2.0E-3000Fb LVL Layout Name F10 Forex 1.75 9.5 2 2 6-0-0 2.0E-3000Fb LVL LIANA 2 (ELEV.1) F9 1.75 9.5 2-0-0 Design Method 2.0E-3000Fb LVL LVL/LSL (Dropped) Description Label Description Width Depth Qty Plies Pcs Length GRANELLI HOMES CORP. BBO4 Forex 1.75 9.5 1 2 2 BRAMPTON, ONT. 2.0E-3000Fb LVL Created Joist (Flush) Label Description Width Depth Plies Pcs Length May 29, 2018 Qty 45 J5 NJH 2.5 9.5 14-0-0 Builder J4 NJH 2.5 9.5 28 12-0-0 **GREEN YORK HOMES** J1 NJH 2.5 9.5 4-0-0 Sales Rep Rim Board Label Description Width Depth Qty Plies Pcs Length Designer R1 Norbord Rimboard 1.125 9.5 17 RCO Plus 1.125 X 9.5 Blocking Shipping Width Depth Qty Plies Pcs Length Label Description Project BLK1 NJH 9.5 LinFt Varies 5-0-0 Builder's Project Hanger Kott Lumber Company Beam/Girder Supported Member 14 Anderson Blvd Label Pcs Description Skew Slope fasteners Stouffville, Ontario H2 21 LT259 4 10dx1 1/2 2 10dx1 1/2 Canada H4 1 HGUS410 46 16d 16 16d L4A 7X4 905-642-4400 Job Path Framer to verify dimensions on the architectural drawings. D:\Users\rochavillo\WORK FROM 2. Double joist only require filler/backer ply when supporting HOME\GREEN YORK HOMES another member using a face-mounted hanger. \GRANELLI HOME CORP\MODELS . Install 2x4 blocking @ 24" o/c under parallel non-load bearing walls. \LIANA 2\LIANA 2 ELEV 1\FLOOR 4. Install single-ply flush window header along inside face of rimboard/rimjoist. Second Floor 5. Refer to Nascor specifier guide for installation works Design Method LSD 5. Squash blocks recommended to be installed at end bearing on Building Code NBCC 2010 / OBC all first level joists which support loading from above exceeding 2012 two levels floor or roof. Floor 7. Load transfer blocks to be installed under all point loads. 8. It shall be the framer's responsibility that floor joists and beams are Loads fastened as per the hanger manufacturer's standards. Live 40 15 Dead Refer to Multiple Member Connection Detail to ply to ply nailing or Deflection Joist bolting requirements LL Span L/ 480 Rim parallel to joists: 1-1/8" rimboard with 2"x 4" block (1/16" longer than TL Span L/ 360 rim depth @ 16" o/c). All other components and structural elements 480 LL Cant 2L/ supporting the floor system such as beams, walls, columns, and foundation walls and footings including anchorage of components and 360 TL Cant 2L/ bracing for lateral stability are the responsibility of Others. Deflection Girder 360 LL Span L/ Hatch area represents ceramic tiled floor with an addtional dead load TL Span L/ 240 480 LL Cant 2L/ The framing shown on this layout may deviate from the architectural 360 TL Cant 2L/ and structural drawings. Project Engineer to review and approve the deviation prior Decking **OSB** Deck ARCHITECTURAL DRAWINGS: Thickness 5/8"

JARDIN DESIGN GROUP INC.

Date: Rev.1: May 22,2018

Project No: 17-55

Model: Liana 2

64 Jardin Dr., Suite 3A, Vaughan, ON

Fastener

Vibration

Ceiling:



Nailed & Glued

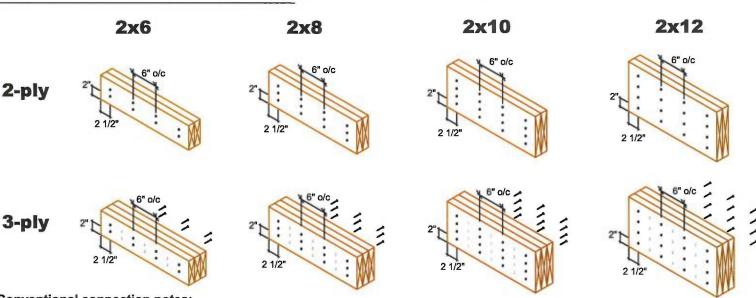
Gypsum 1/2"

M-205=

# ULTIPLE MEMBER CONNECTIONS

HOME CORP-LIANA 2 (ELEV.1&2

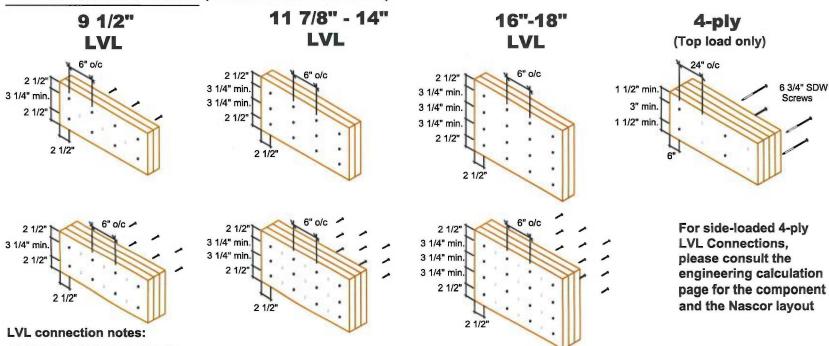
# Conventional Connections (for uniform distributed loads)



# Conventional connection notes:

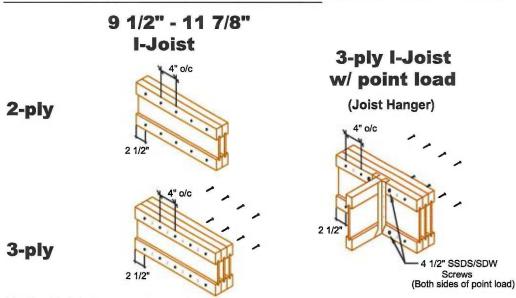
- -Nails to be 3" 10d spiral wire nails.
- -Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

# 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)



# Vertical I-Joist connection notes:

- -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.



**MULTI-PLY** CONNECTION **DETAILS** 

> Date: November 30, 2016 Scale: NTS

3228 Moodie Drive Ottawa, ON **K2H 7V1** Ph: 613-838-2775