

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 only limited to the calculation of this building component for the loads and conditions shown on this drawing.

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

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

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

Installation of NASCOR joists is to be carried out in accordance with the current edition of the manufacturer's approved literature available at <http://www.nascor.ca>.

CODE

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

COMPONENT

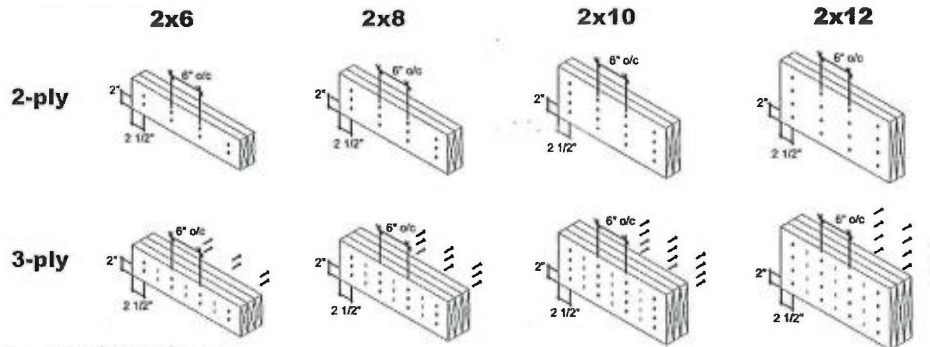
1. The building component used in construction must be the same as indicated on the drawings.
2. The building component must be installed and assembled as per specification shown on the drawing and in accordance with the manufacturer's assembly and installation.
3. Members consisting of multiple plies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

HANDLING AND INSTALLATION

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

MULTIPLE MEMBER CONNECTIONS

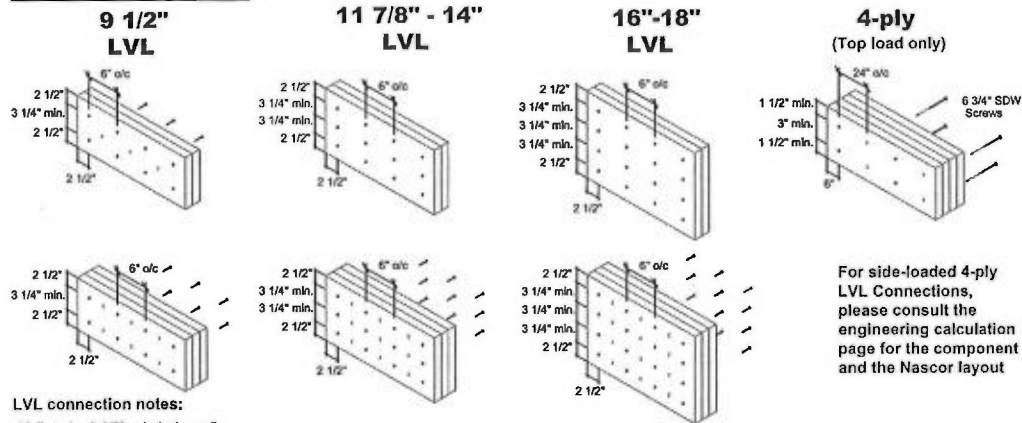
Conventional Connections (for uniform distributed loads)



Conventional connection notes:

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

LVL Connections (for uniform distributed loads)

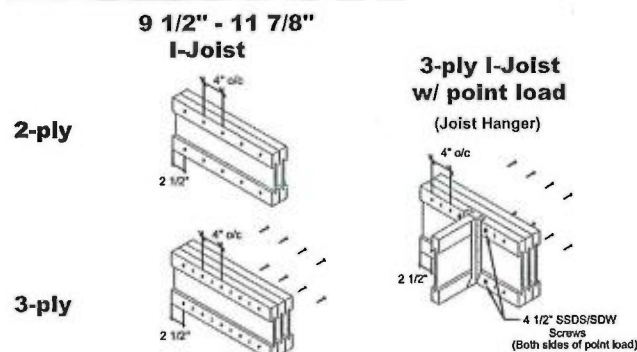


LVL connection notes:

- 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.

For side-loaded 4-ply LVL Connections, please consult the engineering calculation page for the component and the Nascor layout

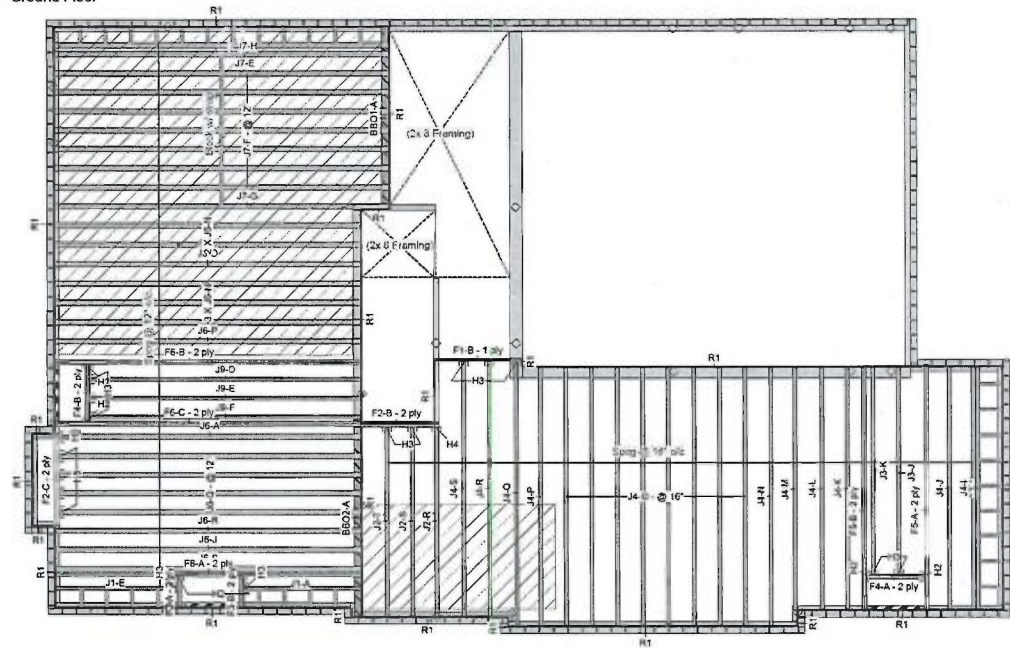
Vertical I-Joist Connections (for uniform distributed loads)



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.

Ground Floor





isDesign™

Client: GREENPARK

Project:

Address:

Date: 8/20/2018

Designer: RCO

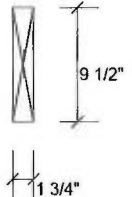
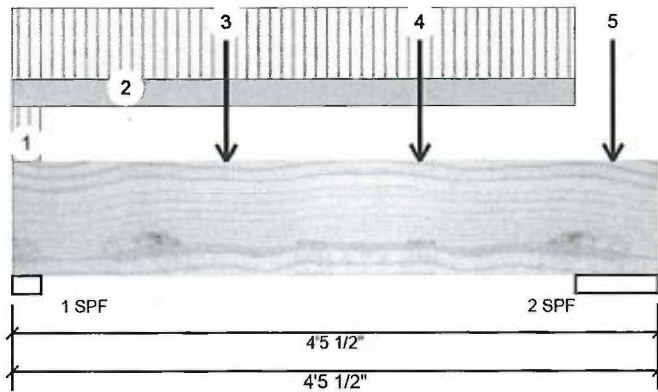
Job Name: MILLWOOD 12-1

Project #:

Page 1 of 1

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

Level: Ground Floor

**Member Information****Unfactored Reactions UNPATTERNED lb (Uplift)**

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		
Dead:	15 PSF		

Brg	Live	Dead	Snow	Wind
1	598	240	0	0
2	678	283	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	47%	300 / 897	1197 L	1.25D+1.5L
2 - SPF	6.875"	19%	354 / 1018	1371 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1328 ft-lb	1'10 3/16"	11362 ft-lb	0.117 (12%)	1.25D+1.5L	L
Unbraced	1328 ft-lb	1'10 3/16"	9065 ft-lb	0.147 (15%)	1.25D+1.5L	L
Shear	1017 lb	3'1 7/8"	4638 lb	0.219 (22%)	1.25D+1.5L	L
Perm Defl in.	0.005 (L/9820)	2' 3/16"	0.127 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.012 (L/3932)	2' 3/16"	0.127 (L/360)	0.090 (9%)	L	L
TL Defl inch	0.016 (L/2808)	2' 3/16"	0.191 (L/240)	0.090 (9%)	D+L	L

Design Notes

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



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-6	(Span)3-4-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 3-10-10		Top	45 PLF	120 PLF	0 PLF	0 PLF	
3	Point	1-5-12		Near Face	145 lb	363 lb	0 lb	0 lb	J4
4	Point	2-9-12		Near Face	139 lb	352 lb	0 lb	0 lb	J4
5	Point	4-1-12		Near Face	42 lb	82 lb	0 lb	0 lb	J4
	Self Weight				4 PLF				

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

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

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

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

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

This design is v

NASCOR





isDesign™

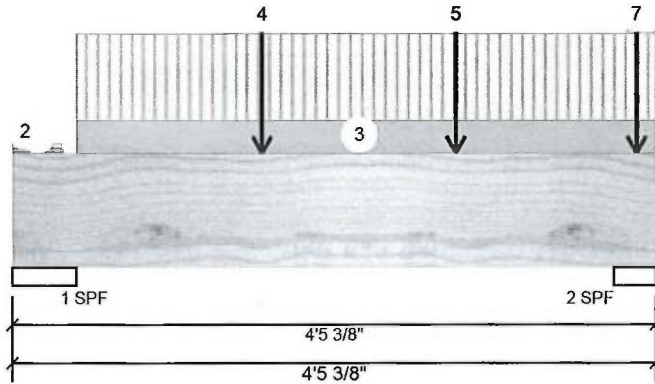
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 1 of 2

F2-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 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 lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	697	288	0	0
2	1058	435	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.375"	12%	360 / 1046	1405	L	1.25D+1.5L
2 - SPF	3.500"	28%	543 / 1587	2130	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1532 ft-lb	2'2 7/8"	22724 ft-lb	0.067 (7%)	1.25D+1.5L	L
Unbraced	1532 ft-lb	2'2 7/8"	22724 ft-lb	0.067 (7%)	1.25D+1.5L	L
Shear	1081 lb	3'5 1/8"	9277 lb	0.117 (12%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/16770)	2'3 7/16"	0.128 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.007 (L/6853)	2'3 7/16"	0.128 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.009 (L/4865)	2'3 7/16"	0.192 (L/240)	0.050 (5%)	D+L	L

Design Notes

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



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-4	(Span)0-4-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-4-2	(Span)0-6-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-5-6 to 4-5-6		Top	90 PLF	240 PLF	0 PLF	0 PLF	
4	Point	1-8-12		Near Face	107 lb	261 lb	0 lb	0 lb	J2
5	Point	3-0-12		Near Face	104 lb	252 lb	0 lb	0 lb	J2
6	Tie-In	4-3-0 to 4-5-6	(Span)3-4-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
 APA: PR-L318

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

This design

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

NASCOR





isDesign™

Client: GREENPARK

Project:

Address:

Date: 8/20/2018

Designer: RCO

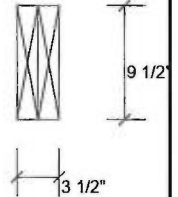
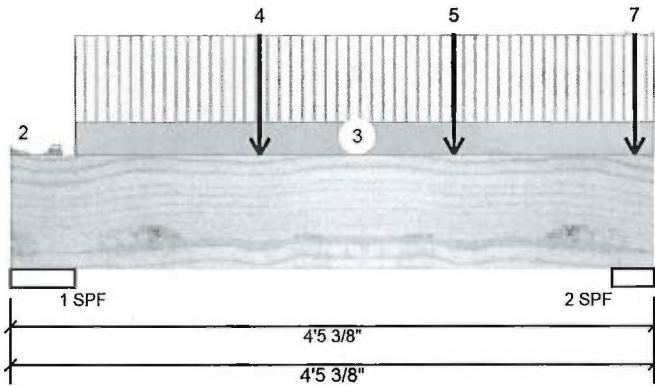
Job Name: MILLWOOD 12-1

Project #:

Page 2 of 2

F2-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	4-3-12		Near Face	110 lb	262 lb	0 lb	0 lb	J2
	Self Weight				8 PLF				

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

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

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

This design is valid until 7/10/2021



isDesign™

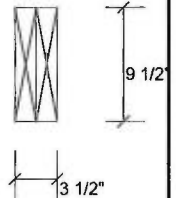
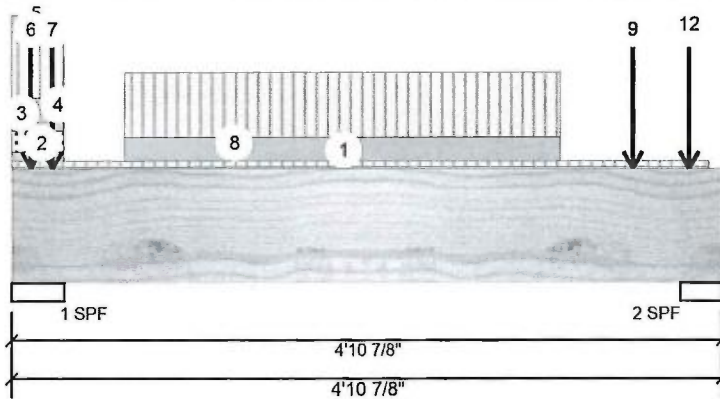
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 1 of 2

F2-C Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 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 lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1718	1856	1869	0
2	1517	1171	682	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	4.375"	64%	2320 / 3663	5982 L 1.25D+1.5S +0.5L
2 - SPF	3.500"	54%	1464 / 2617	4081 L 1.25D+1.5L +0.5S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1576 ft-lb	2'6 3/16"	22724 ft-lb	0.069 (7%)	1.25D+1.5L +0.5S	L
Unbraced	1576 ft-lb	2'6 3/16"	22724 ft-lb	0.069 (7%)	1.25D+1.5L +0.5S	L
Shear	1686 lb	3'10 5/8"	9277 lb	0.182 (18%)	1.25D+1.5L +0.5S	L
Perm Defl in. (L/16135)	0.003	2'6 1/16"	0.146 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.008 (L/6442)	2'6 1/16"	0.146 (L/360)	0.060 (6%)	L+0.5S	L
TL Defl inch	0.011 (L/4604)	2'6 1/16"	0.219 (L/240)	0.050 (5%)	D+L+0.5S	L

Design Notes

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



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-9-12	(Span)1-3-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-4-6		Top	44 PLF	0 PLF	102 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 0-4-6		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
 APA: PR-L318

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

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

This design

NASCOR





isDesign™

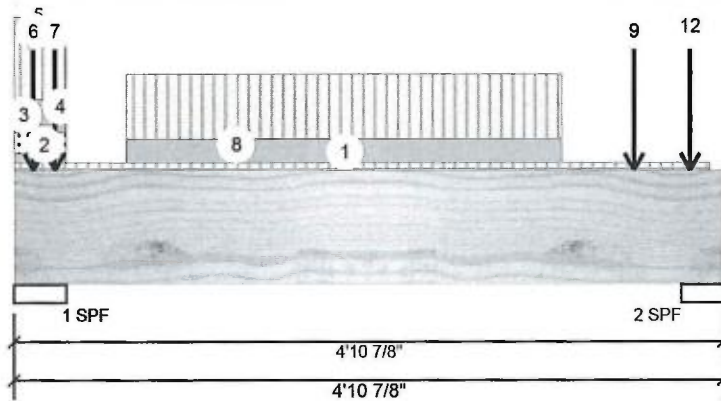
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 2 of 2

F2-C Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	0-0-0 to 0-4-6		Top	120 PLF	319 PLF	0 PLF	0 PLF	J6
5	Part. Uniform	0-0-0 to 0-4-6		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Point	0-1-10		Top	1341 lb	640 lb	1810 lb	0 lb	BBO3 BBO3
7	Point	0-3-7		Near Face	166 lb	360 lb	22 lb	0 lb	J6
8	Part. Uniform	0-9-7 to 3-9-7		Near Face	117 PLF	311 PLF	0 PLF	0 PLF	
9	Point	4-3-7		Near Face	121 lb	324 lb	0 lb	0 lb	J6
10	Point	4-8-2		Top	19 lb	0 lb	0 lb	0 lb	Wall Self Weight
11	Point	4-8-2		Top	824 lb	740 lb	682 lb	0 lb	BBO3 BBO3
12	Point	4-8-2		Top	18 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Self Weight				8 PLF				

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

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

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
 APA: PR-L318

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

NASCOR



This design is valid until 7/10/2021



isDesign™

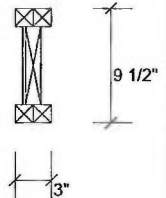
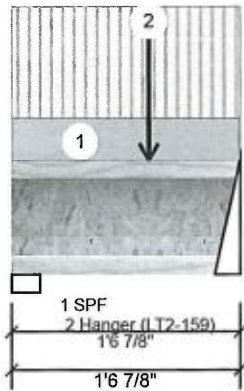
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 1 of 1

F3-A NJ 9.500" 2-Ply - PASSED

Level: Ground Floor


Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 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 lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	95	35	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% 44 / 142	186 L	1.25D+1.5L
2 - Hanger	2.000"	9% 55 / 176	231 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	95 ft-lb	11 7/16"	7340 ft-lb	0.013 (1%)	1.25D+1.5L	L
Unbraced	95 ft-lb	11 7/16"	6912 ft-lb	0.014 (1%)	1.25D+1.5L	L
Shear	218 lb	1'5 5/8"	3080 lb	0.071 (7%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.001 (L/28471)	11 7/16"	0.044 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.001 (L/20731)	11 7/16"	0.067 (L/240)	0.010 (1%)	D+L	L

Design Notes

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



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-6-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-11-7		Far Face	41 lb	110 lb	0 lb	0 lb J1	Pass-Thru Framing Squash Block is required at all point loads over bearings

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

Notes

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

Lumber

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

Handling & Installation

1. Ljoist flanges must not be cut or drilled
2. Refer to latest copy of the Ljoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/reaction details
3. Damaged Ljoists must not be used
4. 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 = 3.6 inches
7. For flat roofs provide ponding

Manufacturer Info

Nascor by Kott

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

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

This design is valid

NASCOR




isDesign™

Client: GREENPARK

Project:

Address:

Date: 8/20/2018

Designer: RCO

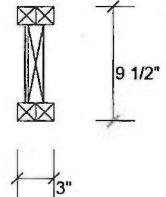
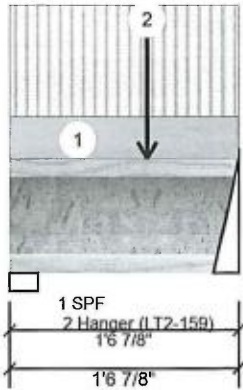
Job Name: MILLWOOD 12-1

Project #:

Page 1 of 1

F3-B NJ 9.500" 2-Ply - PASSED

Level: Ground Floor

**Member Information****Unfactored Reactions UNPATTERNED lb (Uplift)**

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

Brg	Live	Dead	Snow	Wind
1	92	35	0	0
2	114	43	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	7%	43 / 139	182 L	1.25D+1.5L
2 - Hanger	2.000"	9%	53 / 171	224 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	92 ft-lb	11 7/16"	7340 ft-lb	0.012 (1%)	1.25D+1.5L	L
Unbraced	92 ft-lb	11 7/16"	6912 ft-lb	0.013 (1%)	1.25D+1.5L	L
Shear	211 lb	1'5 5/8"	3080 lb	0.068 (7%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.001 (L/29622)	11 7/16"	0.044 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.001 (L/21543)	11 7/16"	0.067 (L/240)	0.010 (1%)	D+L	L



August 21, 2018

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-6-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-11-7		Near Face	39 lb	104 lb	0 lb	0 lb J1	Pass-Thru Framing Squash Block is required at all point loads over bearings

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

Notes

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

Lumber

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

Handling & Installation

1. Joist flanges must not be cut or drilled
2. 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
3. Damaged Joists must not be used
4. 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 ponding

Manufacturer Info

Nascor by Kott

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

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

This design is valid

NASCOR





isDesign™

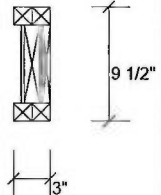
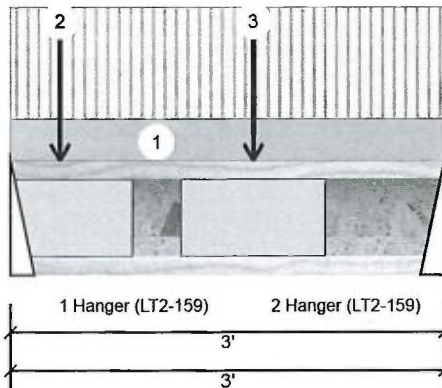
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 1 of 1

F4-A NJ 9.500" 2-Ply - PASSED

Level: Ground Floor

**Member Information****Unfactored Reactions UNPATTERNED lb (Uplift)**

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

Brg	Live	Dead	Snow	Wind
1	358	134	0	0
2	236	88	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	27% 167 / 536	704 L		1.25D+1.5L
2 - Hanger	2.000"	18% 110 / 354	465 L		1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	506 ft-lb	1'8 1/8"	7340 ft-lb	0.069 (7%)	1.25D+1.5L	L
Unbraced	506 ft-lb	1'8 1/8"	4678 ft-lb	0.108 (11%)	1.25D+1.5L	L
Shear	697 lb	1 1/4"	3080 lb	0.226 (23%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/23286)	1'8 1/8"	0.093 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.004 (L/8709)	1'8 1/8"	0.093 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.005 (L/6339)	1'8 1/8"	0.140 (L/240)	0.040 (4%)	D+L	L

Design Notes

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



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-0-0	(Span)1-8-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-4-2		Far Face	72 lb	192 lb	0 lb	0 lb	J3
3	Point	1-8-2		Far Face	111 lb	297 lb	0 lb	0 lb	Pass-Thru Framing Squash Block is required at all point loads over bearings

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

Notes

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

Lumber

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

chemicals**Handling & Installation**

1. Joist flanges must not be cut or drilled
2. 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
3. Damaged Joists must not be used
4. 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 ponding

Manufacturer Info

Nascor by Kott

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

This design is

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

NASCOR



isDesign™

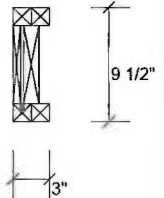
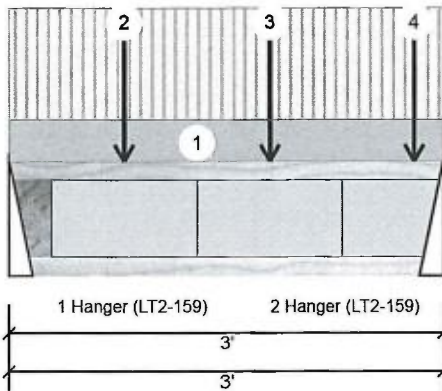
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 1 of 1

F4-B NJ 9.500" 2-Ply - PASSED

Level: Ground Floor


Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	370	139	0	0
2	466	175	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - Hanger	2.000"	28% 173 / 555	729 L	1.25D+1.5L
2 - Hanger	2.000"	35% 218 / 700	918 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	596 ft-lb	1'9 9/16"	7340 ft-lb	0.081 (8%)	1.25D+1.5L	L
Unbraced	596 ft-lb	1'9 9/16"	4678 ft-lb	0.127 (13%)	1.25D+1.5L	L
Shear	911 lb	2'10 3/4"	3080 lb	0.296 (30%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/19334)	1'8 15/16"	0.093 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/7254)	1'8 7/8"	0.093 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.006 (L/5275)	1'8 7/8"	0.140 (L/240)	0.050 (5%)	D+L	L

Design Notes

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



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-0-0	(Span)1-8-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-9-9		Near Face	100 lb	268 lb	0 lb	0 lb	J9
3	Point	1-9-9		Near Face	105 lb	279 lb	0 lb	0 lb	Pass thru Framing Squash Block is required at all point loads over bearings
4	Point	2-9-9		Near Face	69 lb	185 lb	0 lb	0 lb	

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

Notes

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

Lumber

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

chemicals
Handling & Installation

1. Joist flanges must not be cut or drilled.
2. 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.
3. Damaged Joists must not be used.
4. 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 = 3.6 inches.
7. For flat roofs provide ponding.

Manufacturer Info

Nascor by Kott

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

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

This design is valid

NASCOR




isDesign™

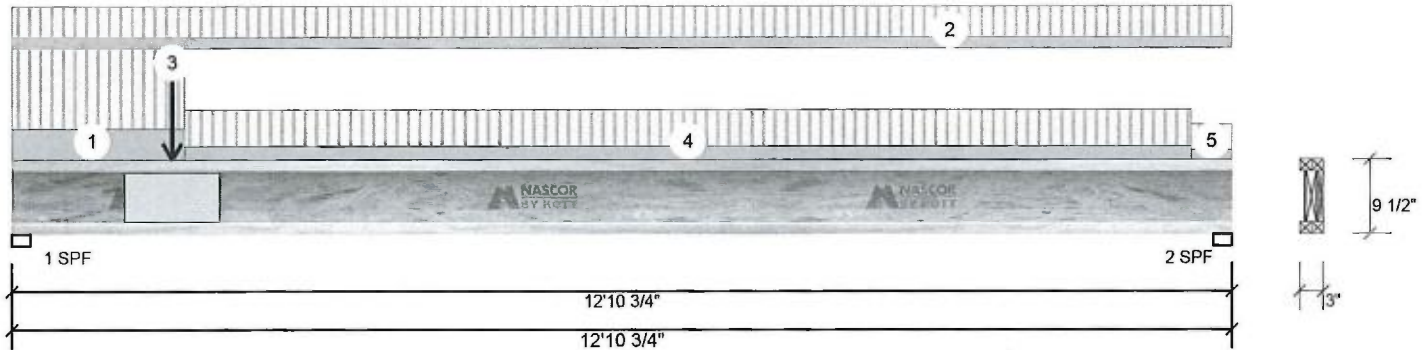
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 1 of 1

F5-A NJ 9.500" 2-Ply - PASSED

Level: Ground Floor

**Member Information****Unfactored Reactions UNPATTERNED lb (Uplift)**

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

Brg	Live	Dead	Snow	Wind
1	612	229	0	0
2	374	140	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	45%	286 / 918	1205	L	1.25D+1.5L
2 - SPF	2.375"	27%	175 / 560	735	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2525 ft-lb	5'9 7/8"	7340 ft-lb	0.344 (34%)	1.25D+1.5L	L
Unbraced	2525 ft-lb	5'9 7/8"	2551 ft-lb	0.990 (99%)	1.25D+1.5L	L
Shear	1181 lb	1 5/8"	3080 lb	0.383 (38%)	1.25D+1.5L	L
Perm Defl in.	0.055 (L/2734)	6'3 1/16"	0.421 (L/360)	0.130 (13%)	D	Uniform
LL Defl inch	0.148 (L/1024)	6'3 1/16"	0.421 (L/360)	0.350 (35%)	L	L
TL Defl inch	0.203 (L/745)	6'3 1/16"	0.631 (L/240)	0.320 (32%)	D+L	L

Design Notes

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



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 12-10-12	(Span)1-2-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-6		Far Face	88 lb	236 lb	0 lb	0 lb	F4
4	Tie-In	1-9-14 to 12-5-10	(Span)1-5-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	12-5-10 to 12-10-12	(Span)1-0-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	

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

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

Notes

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

Lumber

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

chemicals**Handling & Installation**

- Ljoist flanges must not be cut or drilled
- Refer to latest copy of the Ljoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
- Damaged Ljoists 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 ponding

Manufacturer Info

Nascor by Kott

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

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

This design is

NASCOR





isDesign™

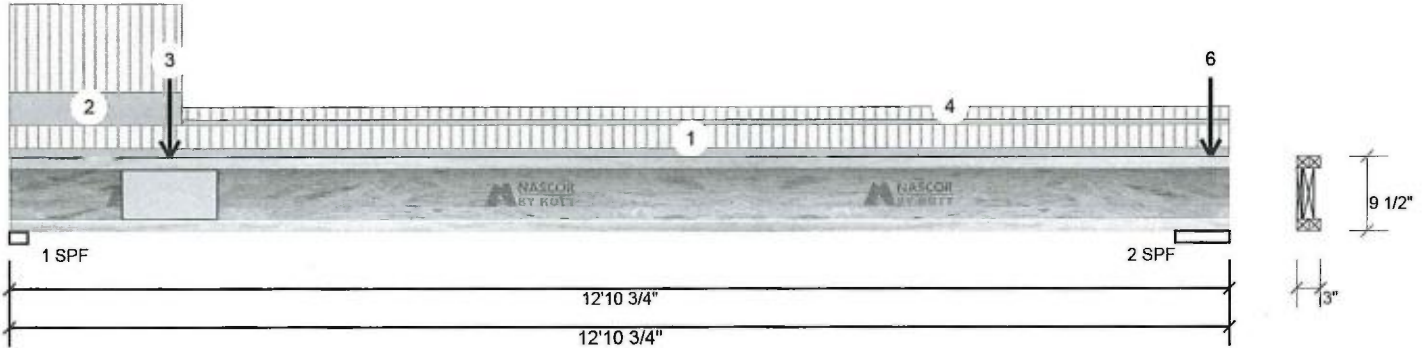
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 1 of 1

F5-B NJ 9.500" 2-Ply - PASSED

Level: Ground Floor

**Member Information****Unfactored Reactions UNPATTERNED lb (Uplift)**

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

Brg	Live	Dead	Snow	Wind
1	574	215	0	0
2	400	203	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	42%	269 / 861	1130 L	1.25D+1.5L
2 - SPF	6.875"	28%	254 / 600	854 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1713 ft-lb	4'3 11/16"	7340 ft-lb	0.233 (23%)	1.25D+1.5L	L
Unbraced	1713 ft-lb	4'3 11/16"	1720 ft-lb	0.996 (100%)	1.25D+1.5L	L
Shear	1108 lb	1 5/8"	3080 lb	0.360 (36%)	1.25D+1.5L	L
Perm Defl in.	0.035 (L/4184)	5'9 11/16"	0.408 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.094 (L/1568)	5'9 11/16"	0.408 (L/360)	0.230 (23%)	L	L
TL Defl inch	0.129 (L/1141)	5'9 11/16"	0.612 (L/240)	0.210 (21%)	D+L	L

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top flange must be laterally braced at a maximum of 5' o.c.
- Bottom flange braced at bearings.



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-10-12	(Span)0-10-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-6		Near Face	134 lb	358 lb	0 lb	0 lb	F4
4	Tie-In	1-9-14 to 12-10-12	(Span)0-5-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	Pass thru Framing Squash Block is required at all point loads over bearings
5	Point	12-8-6		Top	64 lb	171 lb	0 lb	0 lb	J4
6	Point	12-8-6		Top	53 lb	0 lb	0 lb	0 lb	Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Notes

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

Lumber

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

chemicals**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, 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.

- 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 ponding

Manufacturer Info

Nascor by Kott

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

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

This design is

NASCOR



isDesign™

Client: GREENPARK

Project:

Address:

Date: 8/20/2018

Designer: RCO

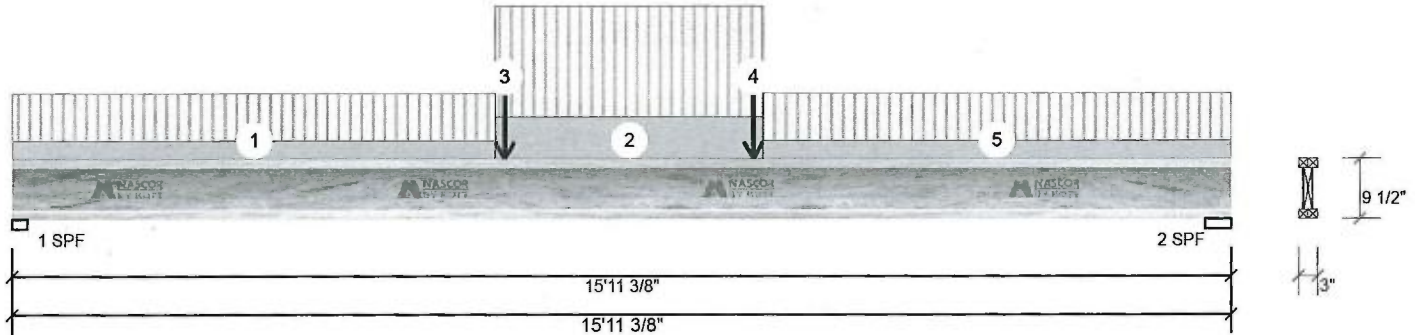
Job Name: MILLWOOD 12-1

Project #:

Page 1 of 1

F6-A NJ 9.500" 2-Ply - PASSED

Level: Ground Floor

**Member Information**

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	266	100	0	0
2	274	103	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	2.375"	19%	125 / 399	523 L 1.25D+1.5L
2 - SPF	4.125"	18%	128 / 411	539 L 1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2762 ft-lb	7'10 5/16"	7340 ft-lb	0.376 (38%)	1.25D+1.5L	L
Unbraced	2762 ft-lb	7'10 5/16"	2786 ft-lb	0.991 (99%)	1.25D+1.5L	L
Shear	531 lb	15'8"	3080 lb	0.172 (17%)	1.25D+1.5L	L
Perm Defl in.	0.083 (L/2235)	7'11 1/16"	0.518 (L/360)	0.160 (16%)	D	Uniform
LL Defl inch	0.222 (L/838)	7'11"	0.518 (L/360)	0.430 (43%)	L	L
TL Defl inch	0.306 (L/610)	7'11 1/16"	0.777 (L/240)	0.390 (39%)	D+L	L

Design Notes

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



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 6-3-14	(Span)0-8-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	6-3-14 to 9-9-14	(Span)1-8-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	6-5-6		Near Face	44 lb	118 lb	0 lb	0 lb	F3
4	Point	9-8-6		Near Face	43 lb	114 lb	0 lb	0 lb	E3
5	Tie-In	9-9-14 to 15-11-6	(Span)0-8-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	

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

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

Notes

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

Lumber

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

chemicals**Handling & Installation**

- Ljoist flanges must not be cut or drilled
- Refer to latest copy of the Ljoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
- Damaged Ljoists 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 ponding

Manufacturer Info

Nascor by Kott

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

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

This design is valid





isDesign™

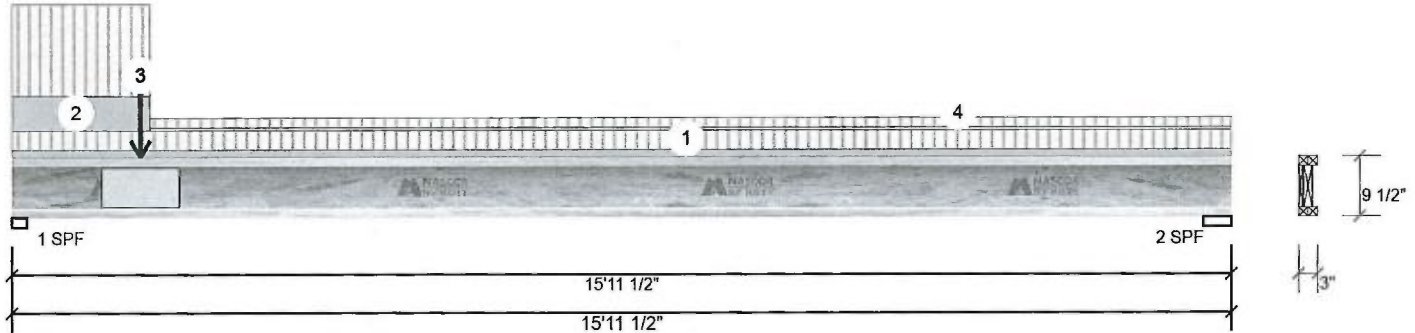
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 1 of 1

F6-B NJ 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 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 lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	678	255	0	0
2	214	80	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	50%	318 / 1017	1335 L	1.25D+1.5L
2 - SPF	4.375"	14%	100 / 320	420 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2119 ft-lb	5'3 3/8"	7340 ft-lb	0.289 (29%)	1.25D+1.5L	L
Unbraced	2119 ft-lb	5'3 3/8"	2138 ft-lb	0.991 (99%)	1.25D+1.5L	L
Shear	1315 lb	1'5/8"	3080 lb	0.427 (43%)	1.25D+1.5L	L
Perm Defl in.	0.067 (L/2766)	7'4"	0.517 (L/360)	0.130 (13%)	D	Uniform
LL Defl inch	0.179 (L/1038)	7'4"	0.517 (L/360)	0.350 (35%)	L	L
TL Defl inch	0.247 (L/755)	7'4"	0.776 (L/240)	0.320 (32%)	D+L	L

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'6" o.c.
- 5 Bottom flange braced at bearings.



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-11-8	(Span)0-8-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-6		Near Face	175 lb	466 lb	0 lb	0 lb	F4
4	Tie-In	1-9-14 to 15-11-8	(Span)0-3-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	

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

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

Notes

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

Lumber

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

chemicals

Handling & Installation

1. Ljoist flanges must not be cut or drilled
2. Refer to latest copy of the Ljoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/installation details
3. Damaged Ljoists must not be used
4. 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

6. Web stiffeners for point load as shown Minimum point load bearing length = 3.5 inches
7. For flat roofs provide ponding

Manufacturer Info

Nascor by Kott

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

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

This design is valid

NASCOR





isDesign™

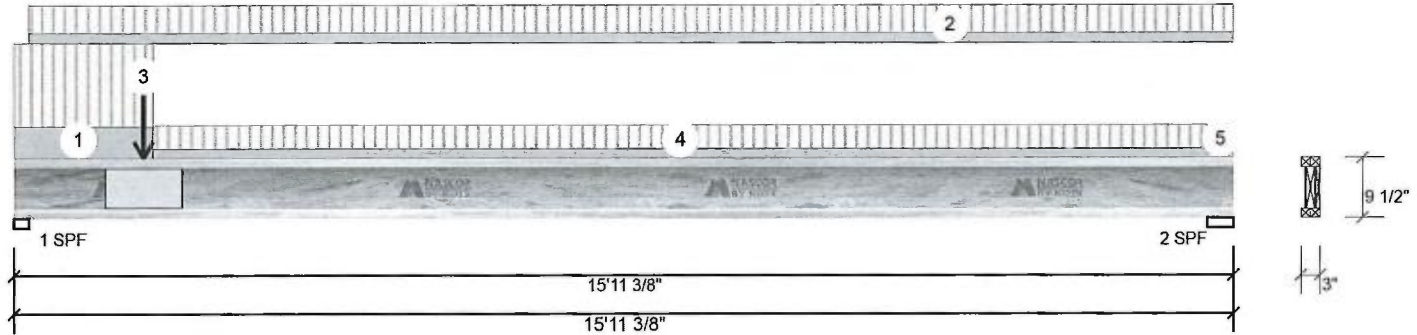
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 1 of 1

F6-C NJ 9.500" 2-Ply - PASSED

Level: Ground Floor


Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 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 lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	725	272	0	0
2	361	135	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	53%	340 / 1088	1428	L	1.25D+1.5L
2 - SPF	4.125"	23%	169 / 541	711	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3051 ft-lb	6'10 3/8"	7340 ft-lb	0.416 (42%)	1.25D+1.5L	L
Unbraced	3051 ft-lb	6'10 3/8"	3085 ft-lb	0.989 (99%)	1.25D+1.5L	L
Shear	1411 lb	1 5/8"	3080 lb	0.458 (46%)	1.25D+1.5L	L
Perm Defl in.	0.099 (L/1889)	7'7 5/16"	0.518 (L/360)	0.190 (19%)	D	Uniform
LL Defl inch	0.263 (L/709)	7'7 5/16"	0.518 (L/360)	0.510 (51%)	L	L
TL Defl inch	0.362 (L/515)	7'7 5/16"	0.777 (L/240)	0.470 (47%)	D+L	L

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top flange must be laterally braced at a maximum of 3'9" o.c.
- Bottom flange braced at bearings.



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-2-6 to 15-11-6	(Span)1-0-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-6		Far Face	139 lb	370 lb	0 lb	0 lb	F4
4	Tie-In	1-9-14 to 15-7-4	(Span)0-11-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	15-7-4 to 15-11-6	(Span)0-6-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	

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

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

Notes

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

Lumber

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

Handling & Installation

- Ljoist flanges must not be cut or drilled
- Refer to latest copy of the Ljoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
- Damaged Ljoists 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 ponding

Manufacturer Info

Nascor by Kott

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

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

This design is valid

NASCOR





isDesign™

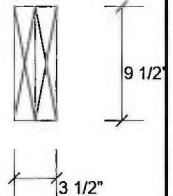
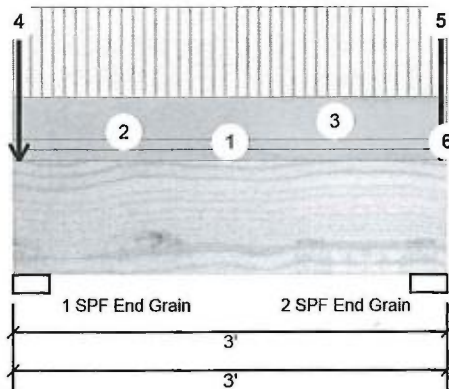
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1 (WOD)
 Project #:

Page 1 of 2

FH3-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Unfactored Reactions UNPATTERNED lb (Uplift)

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

Brg	Live	Dead	Snow	Wind
1	1075	839	127	0
2	1075	839	127	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	35%	1049 / 1676	2725 L		1.25D+1.5L +0.5S
2 - SPF End Grain	3.000"	35%	1049 / 1676	2725 L		1.25D+1.5L +0.5S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	721 ft-lb	1'6"	22724 ft-lb	0.032 (3%)	1.25D+1.5L	L
Unbraced	721 ft-lb	1'6"	22724 ft-lb	0.032 (3%)	1.25D+1.5L	L
Shear	1051 lb	2' 1/4"	9277 lb	0.113 (11%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/24450)	1'6"	0.088 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/17678)	1'6"	0.088 (L/360)	0.020 (2%)	L+0.5S	L
TL Defl inch	0.003 (L/10260)	1'6"	0.131 (L/240)	0.020 (2%)	D+L+0.5S	L

Design Notes

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



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-0 to 3-0-0		Near Face	164 PLF	348 PLF	0 PLF	0 PLF	J7

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
 APA: PR-L318

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

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

NASCOR





isDesign™

Client: GREENPARK

Project:

Address:

Date: 8/20/2018

Designer: RCO

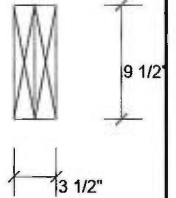
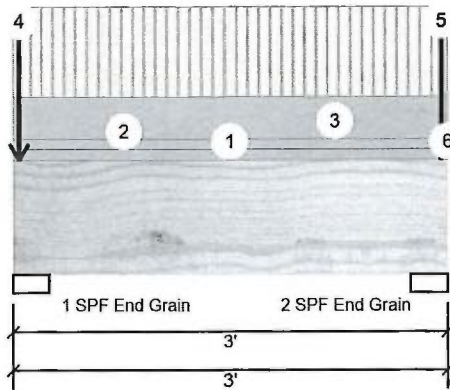
Job Name: MILLWOOD 12-1 (WOD)

Project #:

Page 2 of 2

FH3-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Point	0-0-8		Top	462 lb	553 lb	127 lb	0 lb	Header Column Header Column
5	Point	2-11-8		Top	462 lb	553 lb	127 lb	0 lb	Header Column Header Column
6	Part. Uniform Self Weight	3-0-0 to 3-0-0		Near Face	80 PLF 8 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight

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

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

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

This design is valid until 7/10/2021





isDesign™

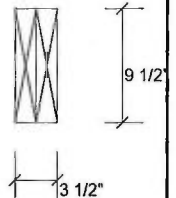
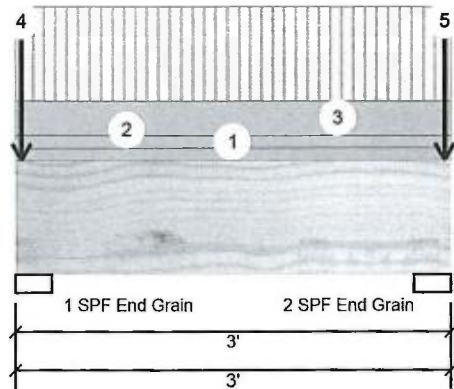
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1 (WOD)
 Project #:

Page 1 of 2

FH3-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 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 lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	980	704	127	0
2	980	704	127	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	31%	881 / 1533	2413	L	1.25D+1.5L +0.5S
2 - SPF End Grain	3.000"	31%	881 / 1533	2413	L	1.25D+1.5L +0.5S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	628 ft-lb	1'6"	22724 ft-lb	0.028 (3%)	1.25D+1.5L	L
Unbraced	628 ft-lb	1'6"	22724 ft-lb	0.028 (3%)	1.25D+1.5L	L
Shear	910 lb	11 3/4"	9277 lb	0.098 (10%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/29920)	1'6"	0.088 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/19530)	1'6"	0.088 (L/360)	0.020 (2%)	L+0.5S	L
TL Defl inch	0.003 (L/11817)	1'6"	0.131 (L/240)	0.020 (2%)	D+L+0.5S	L

Design Notes

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



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-0 to 3-0-0		Near Face	118 PLF	315 PLF	0 PLF	0 PLF	J6

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
 APA: PR-L318

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

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

This design



isDesign™

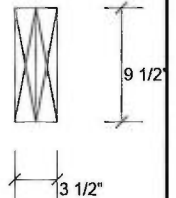
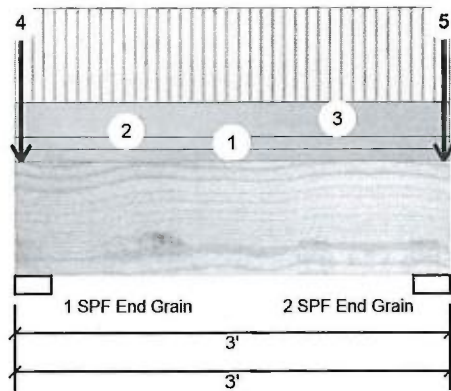
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1 (WOD)
 Project #:

Page 2 of 2

FH3-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Point	0-0-8		Top	396 lb	507 lb	127 lb	0 lb	Header Column Header Column
5	Point	2-11-8		Top	396 lb	507 lb	127 lb	0 lb	Header Column Header Column
	Self Weight				8 PLF				

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

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

Notes

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

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
 APA: PR-L318

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

NASCOR

This design is valid until 7/10/2021



isDesign™

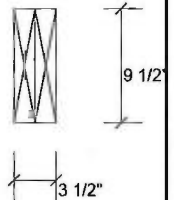
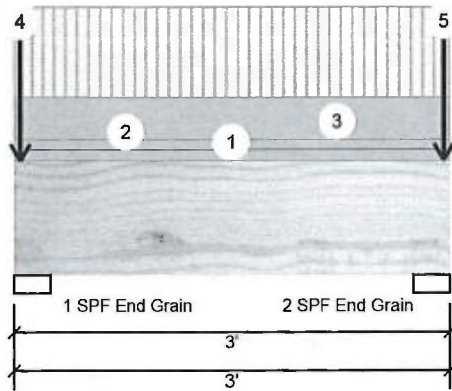
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-2 (WOD)
 Project #:

Page 1 of 2

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

Level: Ground Floor



Member Information

Unfactored Reactions UNPATTERNED lb (Uplift)

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

Brg	Live	Dead	Snow	Wind
1	1075	827	127	0
2	1075	827	127	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	35%	1034 / 1676	2710	L	1.25D+1.5L +0.5S
2 - SPF End Grain	3.000"	35%	1034 / 1676	2710	L	1.25D+1.5L +0.5S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	721 ft-lb	1'6"	22724 ft-lb	0.032 (3%)	1.25D+1.5L	L
Unbraced	721 ft-lb	1'6"	22724 ft-lb	0.032 (3%)	1.25D+1.5L	L
Shear	1051 lb	2' 1/4"	9277 lb	0.113 (11%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/24450)	1'6"	0.088 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/17678)	1'6"	0.088 (L/360)	0.020 (2%)	L+0.5S	L
TL Defl inch	0.003 (L/10260)	1'6"	0.131 (L/240)	0.020 (2%)	D+L+0.5S	L

Design Notes

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



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-0 to 3-0-0		Near Face	164 PLF	348 PLF	0 PLF	0 PLF	J7

Continued on page 2...

Notes Calculated Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads. Lumber 1. Dry service conditions, unless noted otherwise 2. LVL not to be treated with fire retardant or corrosive chemicals	Handling & Installation 1. LVL beams must not be cut or drilled 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals 3. Damaged Beams must not be used 4. Design assumes top edge is laterally restrained 5. Provide lateral support at bearing points to avoid lateral displacement and rotation	6. For flat roofs provide proper drainage to prevent ponding	Manufacturer Info Forex APA: PR-L318	Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400
			This design is valid until 7/10/2021	NASCOR



isDesign™

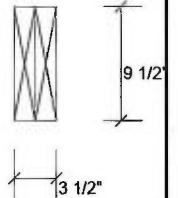
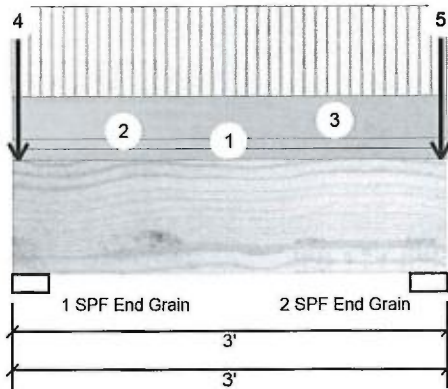
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-2 (WOD)
 Project #:

Page 2 of 2

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

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Point	0-0-8		Top	450 lb	553 lb	127 lb	0 lb	Header Column Header Column
5	Point	2-11-8		Top	450 lb	553 lb	127 lb	0 lb	Header Column Header Column
	Self Weight				8 PLF				

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
 APA: PR-L318

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

NASCOR

This design is valid until 7/10/2021



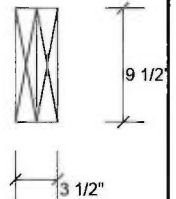
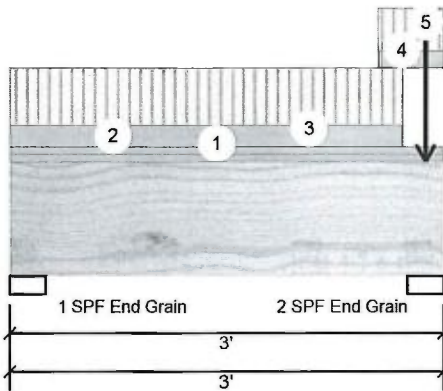
isDesign™

Client: GREENPARK
Project:
Address:

Date: 8/20/2018
Designer: RCO
Job Name: MILLWOOD 12-2 (WOD)
Project #:

Page 1 of 2

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

**Member Information****Unfactored Reactions UNPATTERNED lb (Uplift)**

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

Brg	Live	Dead	Snow	Wind
1	471	308	0	0
2	987	698	127	0

Bearings and Factored Reactions**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	630 ft-lb	1'6 1/16"	22724 ft-lb	0.028 (3%)	1.25D+1.5L	L
Unbraced	630 ft-lb	1'6 1/16"	22724 ft-lb	0.028 (3%)	1.25D+1.5L	L
Shear	971 lb	11 3/4"	9277 lb	0.105 (10%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/29818)	1'6 1/16"	0.088 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/19455)	1'6 1/16"	0.088 (L/360)	0.020 (2%)	L+0.5S	L
TL Defl inch	0.003 (L/11773)	1'6 1/16"	0.131 (L/240)	0.020 (2%)	D+L+0.5S	L

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	14%	385 / 706	1091	L	1.25D+1.5L
2 - SPF End Grain	3.000"	31%	872 / 1544	2416	L	1.25D+1.5L +0.5S

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 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.



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-0 to 2-8-9		Near Face	117 PLF	312 PLF	0 PLF	0 PLF	J6

Continued on page 2...

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

This design is valid until 7/10/2021



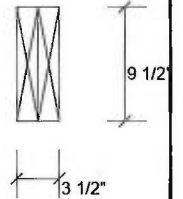
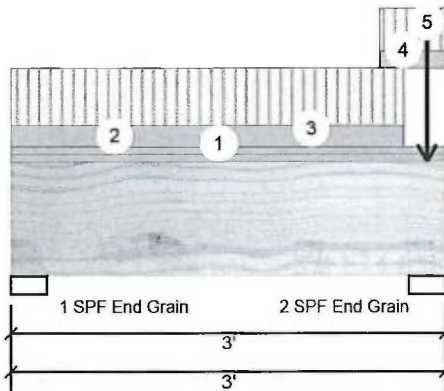
isDesign™

Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-2 (WOD)
 Project #:

Page 2 of 2

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



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	2-6-9 to 3-0-0		Near Face	93 PLF	234 PLF	0 PLF	0 PLF	J6
5	Point	2-10-8		Top	383 lb	505 lb	127 lb	0 lb	Header Column Header Column
	Self Weight				8 PLF				

Notes

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

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

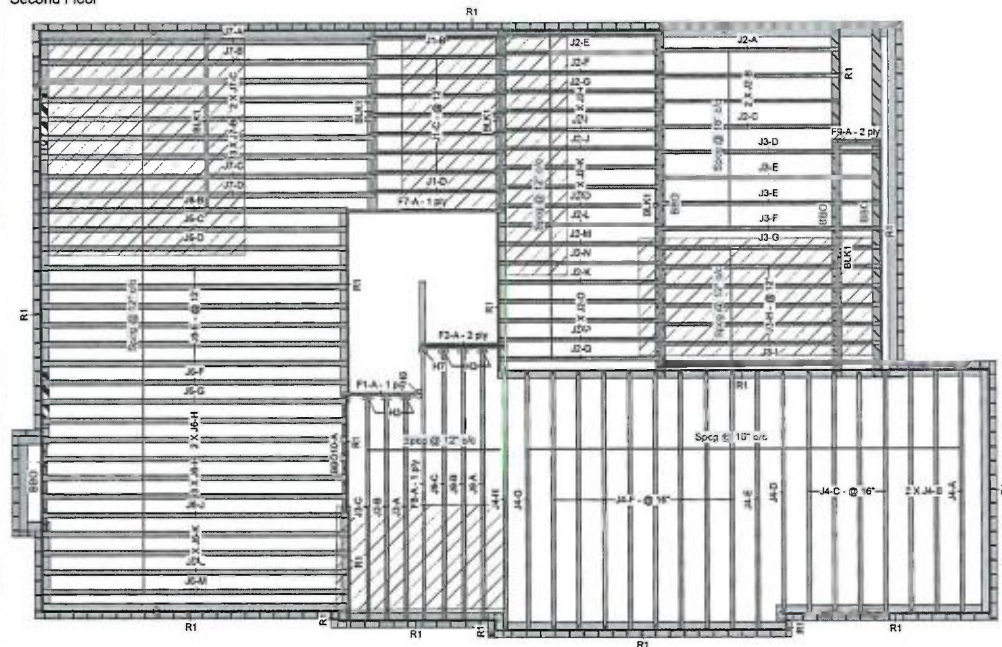
Forex
 APA: PR-L318

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

NASCOR

This design is valid until 7/10/2021

Second Floor



This certification is to confirm that:

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

The floor system must be assembled in accordance to the Nascor Specifier Guide. Multi-ply members must be attached together as per the included multiple member connection detail. All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.



August 21, 2018

Legend



Load from Above
Wall
Well Opening
Norbord Rimboard Plus 1.125 X 9.5
NJH 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)

Second Floor

LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F8	Forex 2.0E-3000Fb LVL	1.75	9.5			1	16-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	9.5			1	10-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	6-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			1	6-0-0
F9	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	4-0-0

LVL/LSL (Dropped)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
BB010	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	8-0-0

Joist (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
J7	NJH60U	3.5	9.5			9	18-0-0
J6	NJH60U	3.5	9.5			21	16-0-0
J9	NJH	2.5	9.5			3	16-0-0
J4	NJH	2.5	9.5			19	14-0-0
J3	NJH	2.5	9.5			14	12-0-0
J2	NJH	2.5	9.5			22	10-0-0
J1	NJH	2.5	9.5			9	8-0-0

Rim Board

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			18	12

Blocking

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Vanes	38-0-0

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H3	6	LT259			4 10d x 1 1/2	2 10d x 1 1/2
H6	1	HUS181/10			36 16d	10 16d
H7	1	HJCO3 R1/2				

NOTES

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

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

ARCHITECTURAL DRAWINGS:

REGION DESIGN INC.
8700 Dufferin St., Concord, ON
Date: Rev.2, July 2018
Project No: 17-04-19
Model: Millwood 12

NASCOR

Layout Name
MILLWOOD 12-2

Design Method
LSD

Description
MINNISALE HOMES
BRAMPTON, ONT.

Created
June 28, 2018

Builder
GREENPARK

Sales Rep
RM

Designer
RCO

Shipping

Project

Builder's Project

Kott Lumber Company

14 Anderson Blvd

Stouffville, Ontario

Canada

L4A 7X4

905-642-4400

Job Path

S:\CUSTOMERS\GREENPARK

MINNISALE HOMES\MODELS

MILLWOOD 12\MILLWOOD12-2

\FLOOR\REV\MILLWOOD 12-2.lsl

Second Floor

Design Method LSD

Building Code NBCC 2010 / OBC

2012

Floor

Loads

Live 40

Dead 15

Deflection Joist

LL Span L/ 480

TL Span L/ 360

LL Cant 2L/ 480

TL Cant 2L/ 360

Deflection Girder

LL Span L/ 360

TL Span L/ 240

LL Cant 2L/ 480

TL Cant 2L/ 360

Decking

Deck SPF Plywood

Thickness 5/8"

Fastener Nailed & Glued

Vibration

Ceiling: Gypsum 1/2"



isDesign™

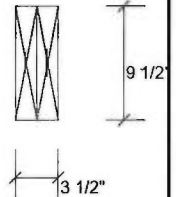
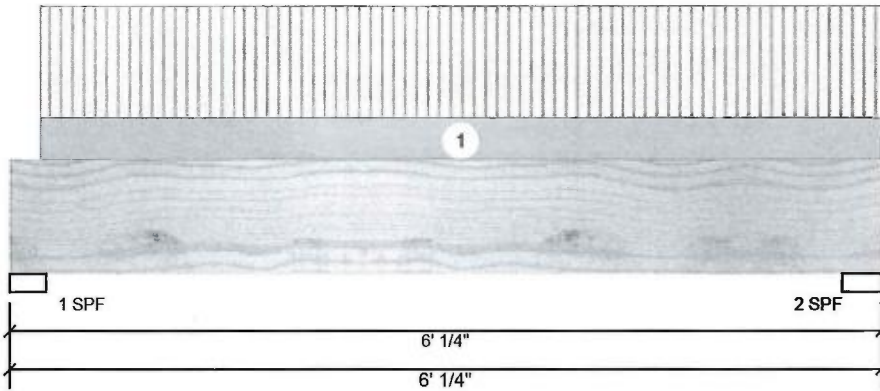
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 1 of 1

BBO10-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



Member Information

Unfactored Reactions UNPATTERNED lb (Uplift)

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

Brg	Live	Dead	Snow	Wind
1	908	363	0	0
2	985	392	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.000"	28%	454 / 1363	1816 L	1.25D+1.5L
2 - SPF	3.250"	28%	489 / 1477	1967 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2575 ft-lb	3'	22724 ft-lb	0.113 (11%)	1.25D+1.5L	L
Unbraced	2575 ft-lb	3'	22099 ft-lb	0.117 (12%)	1.25D+1.5L	L
Shear	1316 lb	11 3/4"	9277 lb	0.142 (14%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/8866)	3'	0.188 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.019 (L/3525)	3'	0.188 (L/360)	0.100 (10%)	L	L
TL Defl inch	0.027 (L/2522)	3'	0.281 (L/240)	0.100 (10%)	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.



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-2-9 to 6-0-4		Top	122 PLF	326 PLF	0 PLF	0 PLF	
	Self Weight				8 PLF				

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

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

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
 APA: PR-L318

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

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

This design

NASCOR





isDesign™

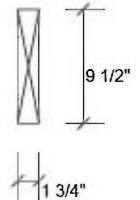
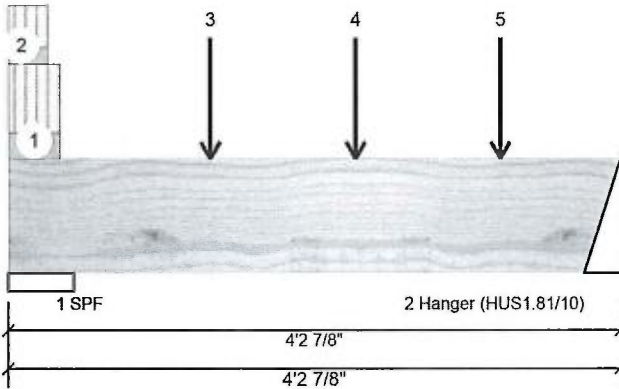
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 1 of 1

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

Level: Second Floor


Member Information
Unfactored Reactions UNPATTERNED lb (Uplift)

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		
Dead:	15 PSF		

Brg	Live	Dead	Snow	Wind
1	323	136	0	0
2	371	155	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	11%	170 / 485	655	L	1.25D+1.5L
2 - Hanger	3.000"	19%	193 / 557	750	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	793 ft-lb	2'4 7/8"	11362 ft-lb	0.070 (7%)	1.25D+1.5L	L
Unbraced	793 ft-lb	2'4 7/8"	9250 ft-lb	0.086 (9%)	1.25D+1.5L	L
Shear	745 lb	3'3 1/8"	4638 lb	0.161 (16%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/16865)	2'4 7/8"	0.122 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.006 (L/6943)	2'4 7/8"	0.122 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.009 (L/4918)	2'4 7/8"	0.183 (L/240)	0.050 (5%)	D+L	L

Design Notes

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



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-6	(Span)0-7-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-3-6	(Span)0-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-4-14		Near Face	96 lb	243 lb	0 lb	0 lb	J3
4	Point	2-4-14		Near Face	90 lb	228 lb	0 lb	0 lb	J3
5	Point	3-4-14		Near Face	86 lb	217 lb	0 lb	0 lb	J3
	Self Weight				4 PLF				

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

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

Notes

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

Lumber

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

chemicals
Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
 APA: PR-L318

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

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

This design is val

NASCOR





isDesign™

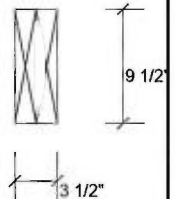
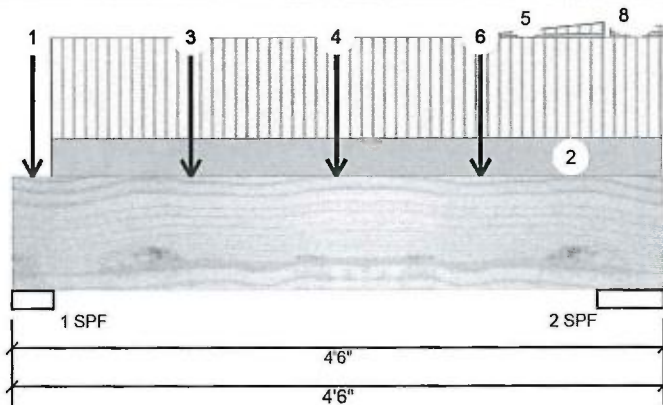
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 1 of 2

F2-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor

**Member Information**

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 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 lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1581	661	0	0
2	1014	404	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	42%	826 / 2371	3197	L	1.25D+1.5L
2 - SPF	5.500"	17%	506 / 1521	2026	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1973 ft-lb	2'2 7/8"	22724 ft-lb	0.087 (9%)	1.25D+1.5L	L
Unbraced	1973 ft-lb	2'2 7/8"	22724 ft-lb	0.087 (9%)	1.25D+1.5L	L
Shear	1424 lb	3'3 3/4"	9277 lb	0.153 (15%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/13554)	2'2 15/16"	0.129 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.009 (L/5394)	2'2 15/16"	0.129 (L/360)	0.070 (7%)	L	L
TL Defl inch	0.012 (L/3859)	2'2 15/16"	0.194 (L/240)	0.060 (6%)	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.



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-1-12		Near Face	313 lb	715 lb	0 lb	0 lb	F8
2	Part. Uniform	0-3-5 to 4-5-13		Top	90 PLF	240 PLF	0 PLF	0 PLF	
3	Point	1-2-14		Near Face	114 lb	290 lb	0 lb	0 lb	J9
4	Point	2-2-14		Near Face	108 lb	277 lb	0 lb	0 lb	J9
5	Tie-In	3-2-14 to 4-1-1	(Span)0-1-12 to 1-3-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Continued on page 2...

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
 APA: PR-L318

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

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

This design is

NASCOR





isDesign™

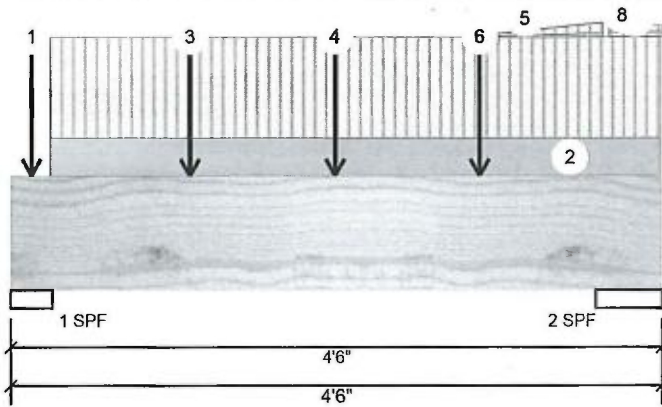
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 2 of 2

F2-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	3-2-14		Near Face	110 lb	283 lb	0 lb	0 lb	J9
7	Tie-In	4-1-10 to 4-6-0	(Span)0-3-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
8	Tie-In	4-1-10 to 4-6-0	(Span)0-8-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				8 PLF				

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

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

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
 APA: PR-L318

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

NASCOR

This design is valid until 7/10/2021



isDesign™

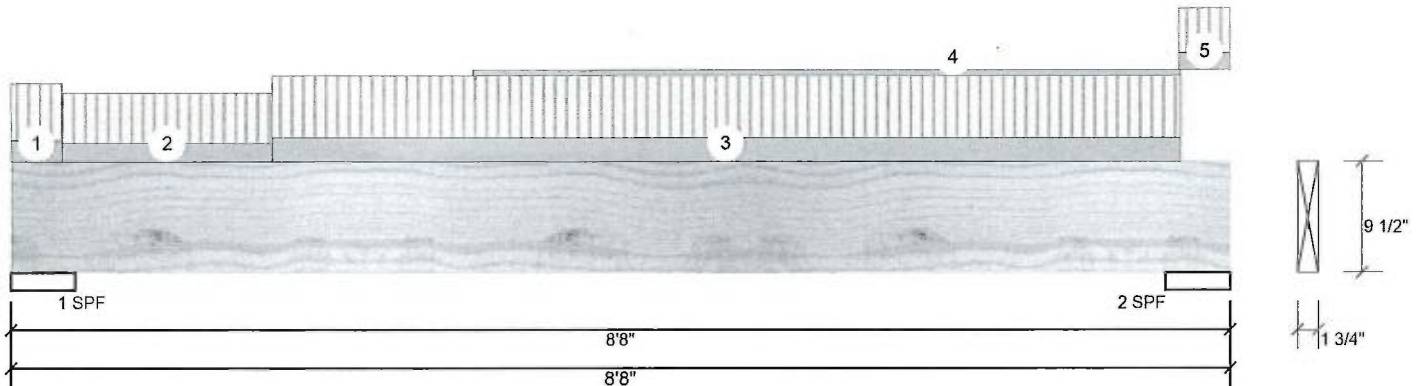
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 1 of 1

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

Level: Second Floor


Member Information
Unfactored Reactions UNPATTERNED lb (Uplift)

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		
Dead:	15 PSF		

Brg	Live	Dead	Snow	Wind
1	84	51	0	0
2	88	56	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	3%	64 / 127	191	L	1.25D+1.5L
2 - SPF	5.500"	3%	71 / 132	203	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	366 ft-lb	4'4 5/8"	11362 ft-lb	0.032 (3%)	1.25D+1.5L	L
Unbraced	366 ft-lb	4'4 5/8"	4734 ft-lb	0.077 (8%)	1.25D+1.5L	L
Shear	150 lb	7'5 3/4"	4638 lb	0.032 (3%)	1.25D+1.5L	L
Perm Defl in.	0.005 (L/18245)	4'4 3/8"	0.263 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.008 (L/11470)	4'4 1/8"	0.263 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.013 (L/7043)	4'4 1/4"	0.394 (L/240)	0.030 (3%)	D+L	L

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind
1	Tie-In	0-0-0 to 0-4-6	(Span)0-11-7	Top	15 PSF	40 PSF	0 PSF	0 PSF
2	Tie-In	0-4-6 to 1-10-4	(Span)0-10-1	Top	15 PSF	40 PSF	0 PSF	0 PSF
3	Tie-In	1-10-4 to 8-3-12	(Span)1-0-9	Top	15 PSF	40 PSF	0 PSF	0 PSF
4	Part. Uniform	3-3-7 to 8-3-12		Top	2 PLF	0 PLF	0 PLF	0 PLF
5	Tie-In	8-3-10 to 8-8-0	(Span)0-8-15	Top	15 PSF	40 PSF	0 PSF	0 PSF
	Self Weight				4 PLF			

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

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



August 21, 2018

Notes

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

Lumber

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

chemicals
Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
 APA: PR-L318

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

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

This design is v



isDesign™

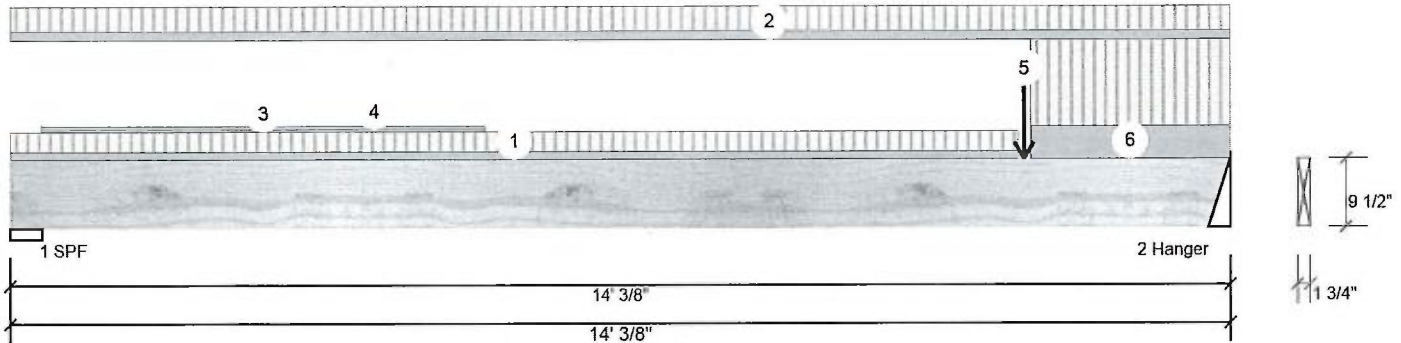
Client: GREENPARK
Project:
Address:

Date: 8/20/2018
Designer: RCO
Job Name: MILLWOOD 12-1
Project #:

Page 1 of 1

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

Level: Second Floor

**Member Information****Unfactored Reactions UNPATTERNED lb (Uplift)**

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

Brg	Live	Dead	Snow	Wind
1	352	182	0	0
2	715	313	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.375"	16%	228 / 528	755 L	1.25D+1.5L
2 - Hanger	3.000"	38%	391 / 1072	1463 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3003 ft-lb	8'8"	11362 ft-lb	0.264 (26%)	1.25D+1.5L	L
Unbraced	3003 ft-lb	8'8"	3005 ft-lb	0.999 (100%)	1.25D+1.5L	L
Shear	1266 lb	13' 5/8"	4638 lb	0.273 (27%)	1.25D+1.5L	L
Perm Defl in.	0.096 (L/1694)	7'4 1/4"	0.451 (L/360)	0.210 (21%)	D	Uniform
LL Defl inch	0.203 (L/801)	7'5 1/2"	0.451 (L/360)	0.450 (45%)	L	L
TL Defl inch	0.299 (L/544)	7'5 1/8"	0.677 (L/240)	0.440 (44%)	D+L	L

Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top must be laterally braced at a maximum of 12'4 7/8" o.c.
- 4 Bottom braced at bearings.



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 11-7-2	(Span) 0-10-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 14-0-6	(Span) 1-1-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-4-5 to 5-5-8		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-4-5 to 5-5-8		Top	3 PLF	0 PLF	0 PLF	0 PLF	Pass 9-11 Framing Squash Block is required at all point loads over bearings
5	Point	11-8-0		Far Face	155 lb	371 lb	0 lb	0 PSF	
6	Tie-In	11-8-14 to 14-0-6	(Span) 3-10-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
	Self Weight				4 PLF				

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

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

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

This design is

NASCOR





isDesign™

Client: GREENPARK

Project:

Address:

Date: 8/20/2018

Designer: RCO

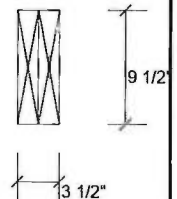
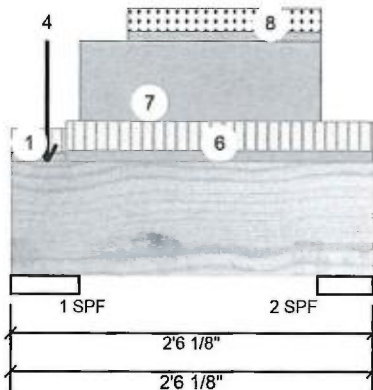
Job Name: MILLWOOD 12-1

Project #:

Page 1 of 2

F9-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor

**Member Information**

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 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 lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	36	129	15	0
2	36	98	18	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.750"	2%	161 / 54	215	L	1.25D+1.5L
2 - SPF	4.625"	2%	123 / 53	176	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	65 ft-lb	1'3 3/4"	14770 ft-lb	0.004 (0%)	1.25D+1.5S	L
Unbraced	65 ft-lb	1'3 3/4"	14770 ft-lb	0.004 (0%)	1.25D+1.5S	L
Shear	18 lb	1'2 1/2"	6030 lb	0.003 (0%)	1.25D+1.5S	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		

Design Notes

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



August 21, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-10	(Span)1-2-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-3-0		Top	1 lb	0 lb	3 lb	0 lb	
3	Point	0-3-0		Top	18 lb	0 lb	0 lb	0 lb	Wall Self Weight
4	Point	0-3-0		Top	15 lb	0 lb	0 lb	0 lb	Wall Self Weight
6	Tie-In	0-4-10 to 2-6-2	(Span)1-5-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Continued on page 2...

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

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

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

This design



isDesign™

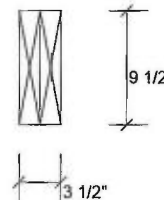
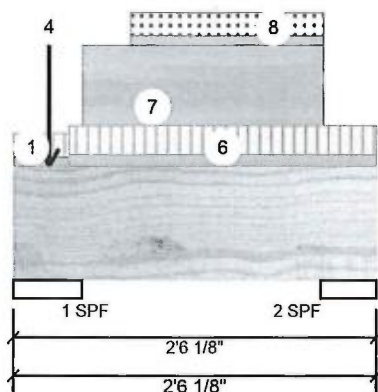
Client: GREENPARK
 Project:
 Address:

Date: 8/20/2018
 Designer: RCO
 Job Name: MILLWOOD 12-1
 Project #:

Page 2 of 2

F9-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Part. Uniform	0-5-12 to 2-1-12		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Part. Uniform	0-9-12 to 2-1-12		Top	10 PLF	0 PLF	23 PLF	0 PLF	
	Self Weight				8 PLF				

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

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

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

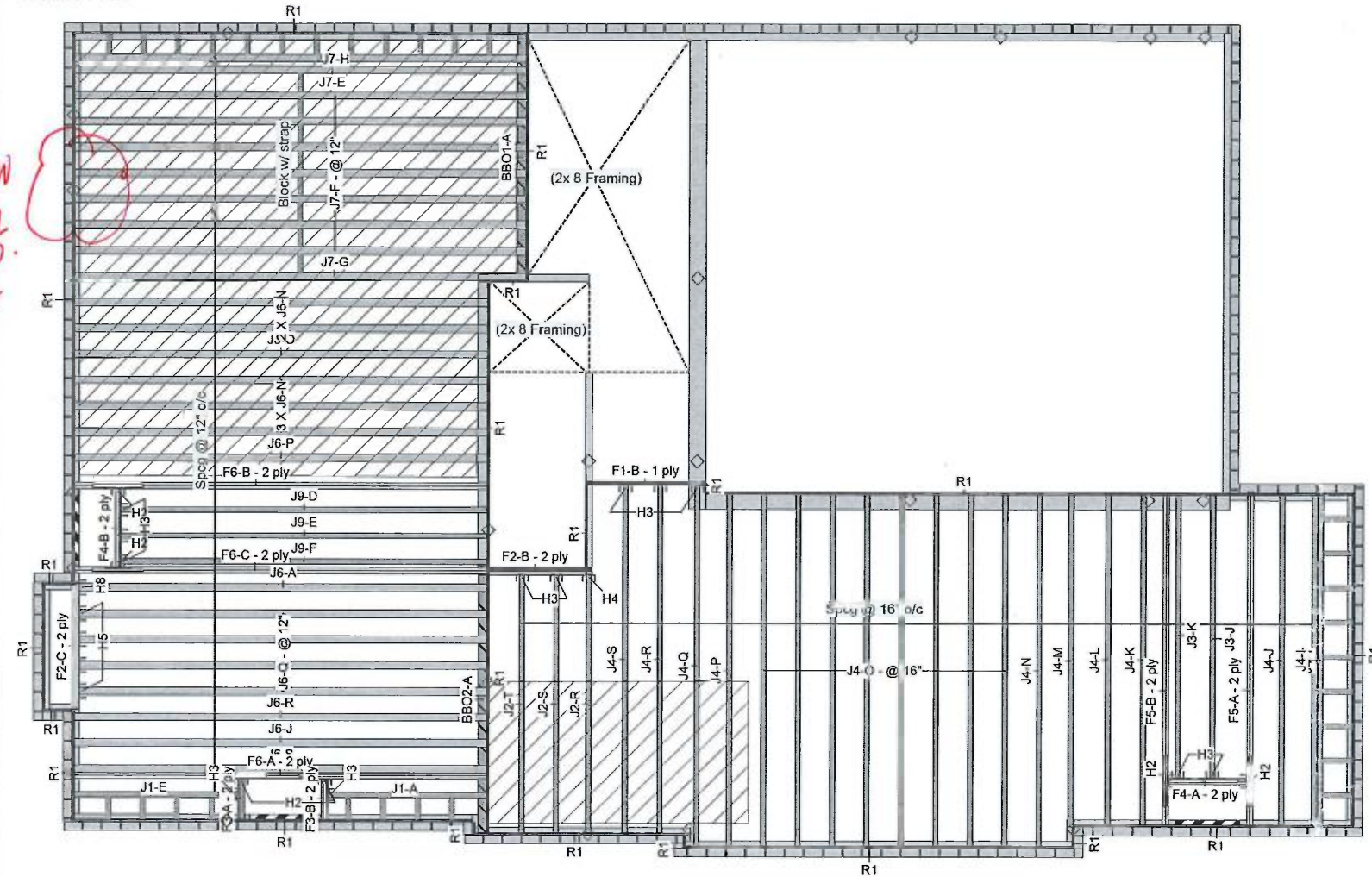
Forex
 APA: PR-L318

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

NASCOR

This design is valid until 7/10/2021

Ground Floor



This certification is to confirm that:

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

The floor system must be assembled in accordance to the Nascor Specifier Guide. Multi-ply members must be attached together as per the included multiple member connection detail. All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.



August 21, 2018

Legend

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

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)

Ground Floor LVL/LSL (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F2	Forex 2.0E-3000Fb LVL	1.75	9.5	2	2	4	6-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			1	6-0-0

Joist (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F6	NJ	1.5	9.5	3	2	6	16-0-0
F5	NJ	1.5	9.5	2	2	4	14-0-0
F4	NJ	1.5	9.5	2	2	4	4-0-0
F3	NJ	1.5	9.5	2	2	4	2-0-0
J7	NJ60U	3.5	9.5			10	18-0-0
J6	NJ60U	3.5	9.5			15	16-0-0
J9	NJH	2.5	9.5			3	16-0-0
J4	NJH	2.5	9.5			19	14-0-0
J3	NJH	2.5	9.5			2	12-0-0
J2	NJH	2.5	9.5			3	10-0-0
J1	NJH	2.5	9.5			2	8-0-0

Rim Board							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			15	12

Blocking							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	33-0-0

Hanger							
				Beam/Girder		Supported Member	
Label	Pcs	Description	Skew	Slope	fasteners	fasteners	
H2	6	LT2-159			4 10dx1 1/2	2 10dx1 1/2	
H3	12	LT259			4 10dx1 1/2	2 10dx1 1/2	
H4	1	LT259					
H5	4	LT359			4 10d	2 10dx1 1/2	
H8	1	LT359					

NOTES:

1. Framers to verify dimensions on the architectural drawings.
2. Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.
3. Install 2x4 blocking @ 24" o/c under parallel non-load bearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist.
5. Refer to Nascor specifier guide for installation works.
6. Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding two levels floor or roof.
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 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 of 5 PSF

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

ARCHITECTURAL DRAWINGS:

REGION DESIGN INC.
8700 Dufferin St., Concord, ON
Date: Rev.2; July 2018
Project No: 17-04-19
Model: Millwood 12

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

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

NASCOR

Layout Name
MILLWOOD 12-2Design Method
LSDDescription
MINNISALE HOMES
BRAMPTON, ONT.Created
June 28, 2018Builder
GREENPARKSales Rep
RMDesigner
RCO

Shipping

Project

Builder's Project

Kott Lumber Company

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

Job Path

S:\CUSTOMERS\GREENPARK
MINNISALE HOMES\MODELS
MILLWOOD 12\MILLWOOD 12-2
FLOOR\REV\MILLWOOD 12-2.isl

Ground Floor

Design Method LSD
Building Code NBCC 2010 / OBC 2012

Floor

Loads
Live 40
Dead 15

Deflection Joist

LL Span L/ 480
TL Span L/ 360
LL Cant 2L/ 480
TL Cant 2L/ 360

Deflection Girder

LL Span L/ 360
TL Span L/ 240
LL Cant 2L/ 480
TL Cant 2L/ 360

Decking

Deck SPF Plywood
Thickness 3/4"

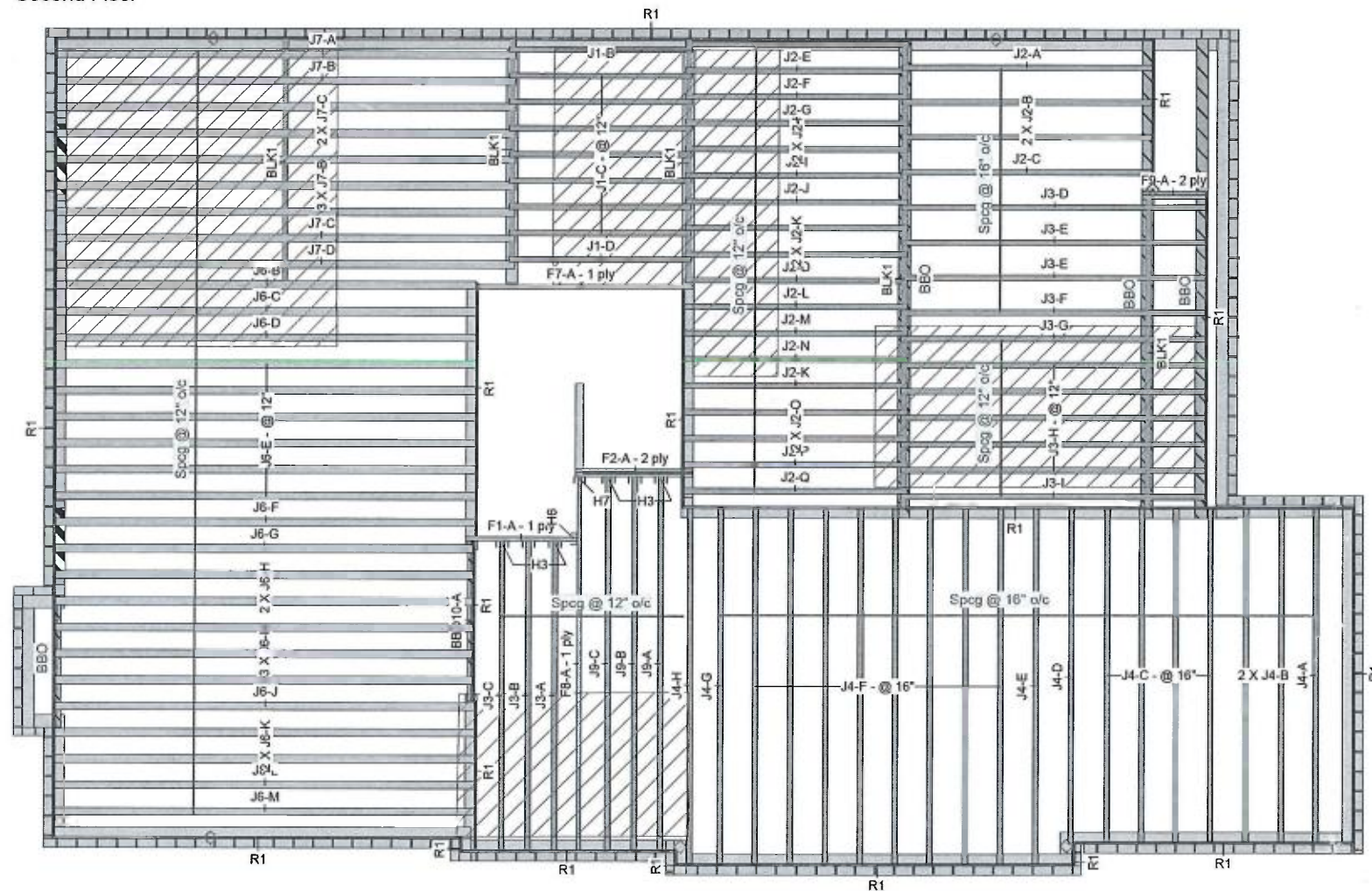
Fastener Nailed & Glued

Vibration

Strapping 1"x4", 1 Row at Midspan

LOT 33

Second Floor



This certification is to confirm that:

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

The floor system must be assembled in accordance to the Nascor Specifier Guide. Multi-ply members must be attached together as per the included multiple member connection detail. All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.

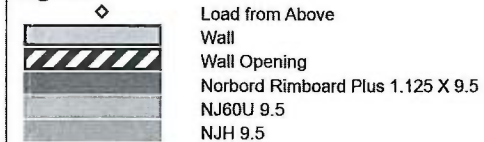


August 21, 2018

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 Ontario Building Code O. Reg. 332/12 as amended

Legend



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)

Second Floor
LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F8	Forex 2.0E-3000Fb LVL	1.75	9.5			1	16-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	9.5			1	10-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	6-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			1	6-0-0
F9	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	4-0-0

LVL/LSL (Dropped)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BBO10	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	8-0-0

Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J7	NJ60U	3.5	9.5			9	18-0-0
J6	NJ60U	3.5	9.5			21	16-0-0
J9	NJH	2.5	9.5			3	16-0-0
J4	NJH	2.5	9.5			19	14-0-0
J3	NJH	2.5	9.5			14	12-0-0
J2	NJH	2.5	9.5			22	10-0-0
J1	NJH	2.5	9.5			9	8-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			18	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	Lin Ft		Varies	38-0-0

Hanger

		Beam/Girder		Supported Member	
Label	Pcs	Description	Skew	Slope	fasteners
H3	6	LT259			4 10dx1 1/2
H6	1	HUS1.81/10			30 16d
H7	1	HUC01.81/9			10 16d

NOTES:

1. Framers to verify dimensions on the architectural drawings.
2. Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.
3. Install 2x4 blocking @ 24" o/c under parallel non-load bearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist.
5. Refer to Nascor specifier guide for installation works.
6. Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding two levels floor or roof.
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 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 of 5 PSF

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

ARCHITECTURAL DRAWINGS:

REGION DESIGN INC.
8700 Dufferin St., Concord, ON
Date: Rev.2; July 2018
Project No: 17-04-19
Model: Millwood 12

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

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

NASCOR

Layout Name

MILLWOOD 12-2

Design Method

LSD

Description

MINNISALE HOMES
BRAMPTON, ONT.

Created

June 28, 2018

Builder

GREENPARK

Sales Rep

RM

Designer

RCO

Shipping

Project

Builder's Project

Kott Lumber Company

14 Anderson Blvd

Stouffville, Ontario

Canada

L4A 7X4

905-642-4400

Job Path

S:\CUSTOMERS\GREENPARK

MINNISALE HOMES\MODELS

MILLWOOD 12\MILLWOOD12-2

\FLOOR\REV\MILLWOOD 12-2.isl

Second Floor

Design Method LSD

Building Code NBCC 2010 / OBC

2012

Floor

Loads

Live

40

Dead

15

Deflection Joist

LL Span L/

480

TL Span L/

360

LL Cant 2L/

480

TL Cant 2L/

360

Deflection Girder

LL Span L/

360

TL Span L/

240

LL Cant 2L/

480

TL Cant 2L/

360

Decking

Deck

SPF Plywood

Thickness

5/8"

Fastener

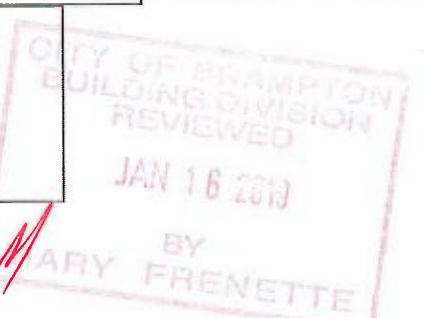
Nailed & Glued

Vibration

Ceiling:

Gypsum 1/2"

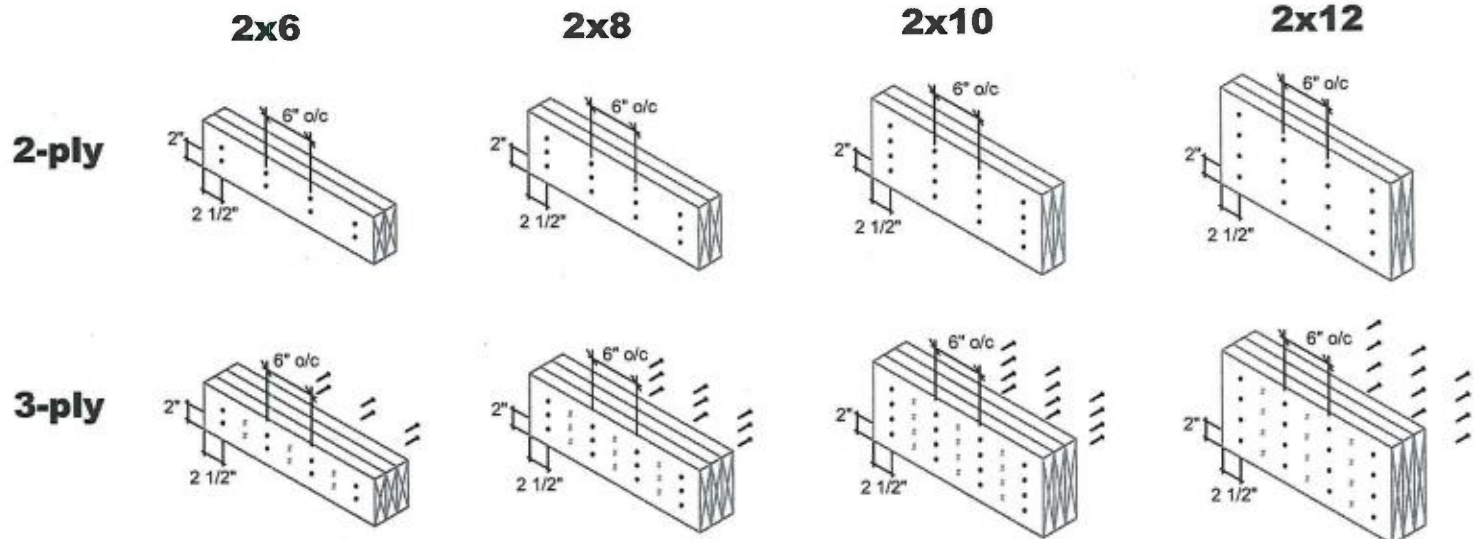
Lot 33



KOTT

MULTIPLE MEMBER CONNECTIONS

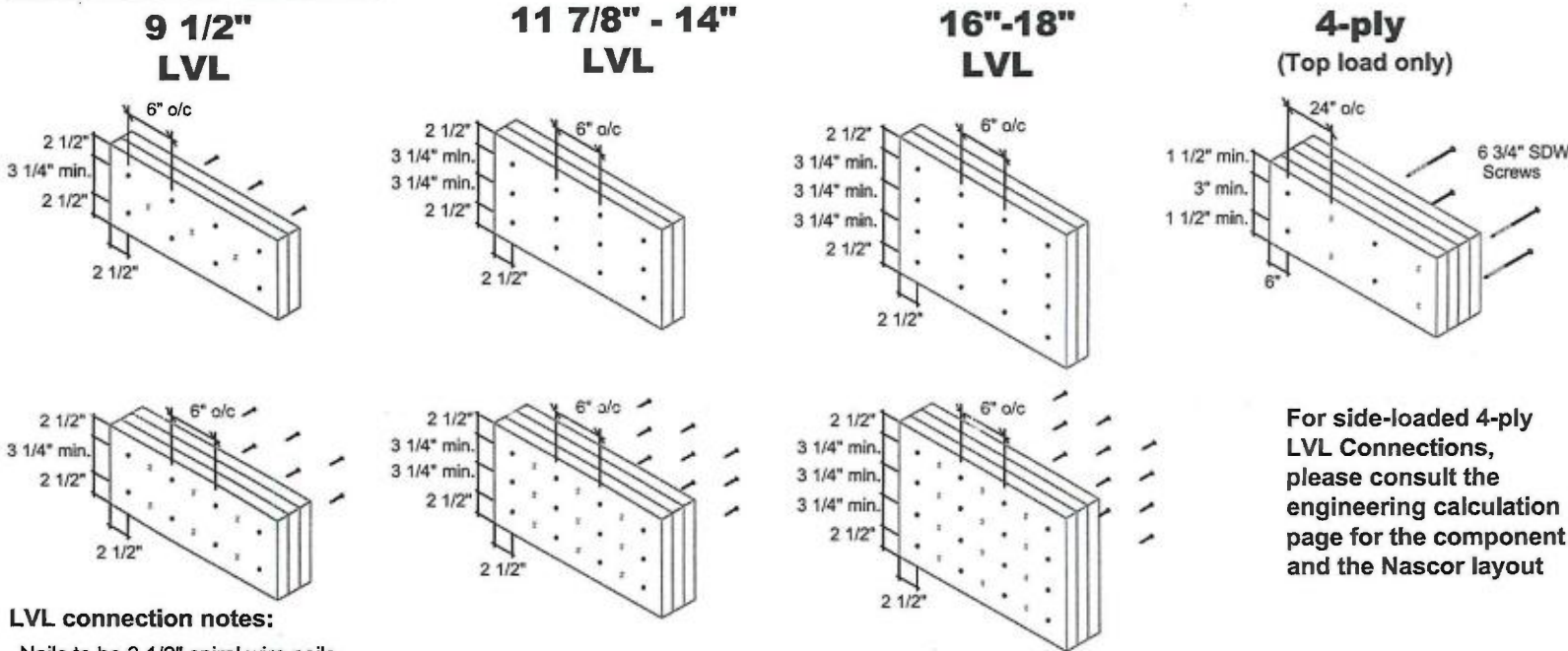
Conventional Connections (for uniform distributed loads)



Conventional connection notes:

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

LVL Connections (for uniform distributed loads)

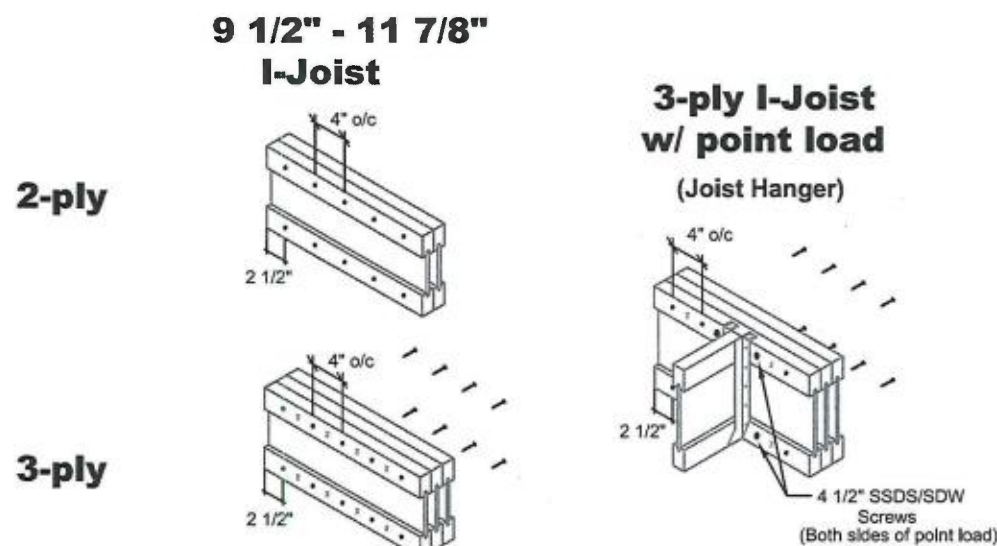


LVL connection notes:

- 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.

For side-loaded 4-ply LVL Connections, please consult the engineering calculation page for the component and the Nascor layout

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



KOTT
3228 Moodie Drive
Ottawa, ON
K2H 7V1
Ph: 613-838-2775
Fax: 613-838-4751

