

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.

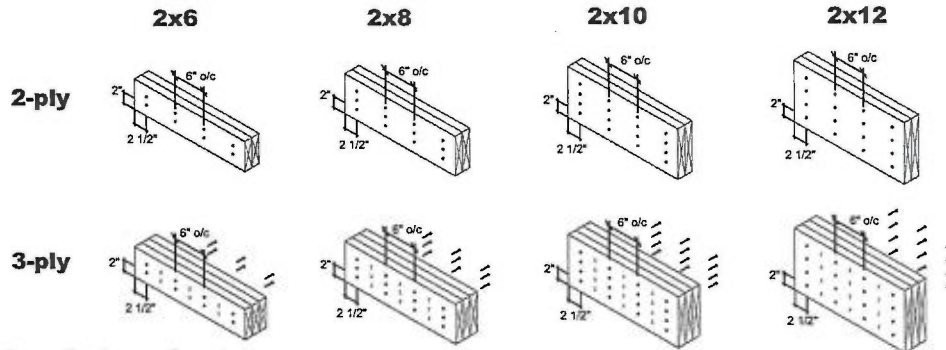
HANDLING AND INSTALLATION

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



MULTIPLE MEMBER CONNECTIONS

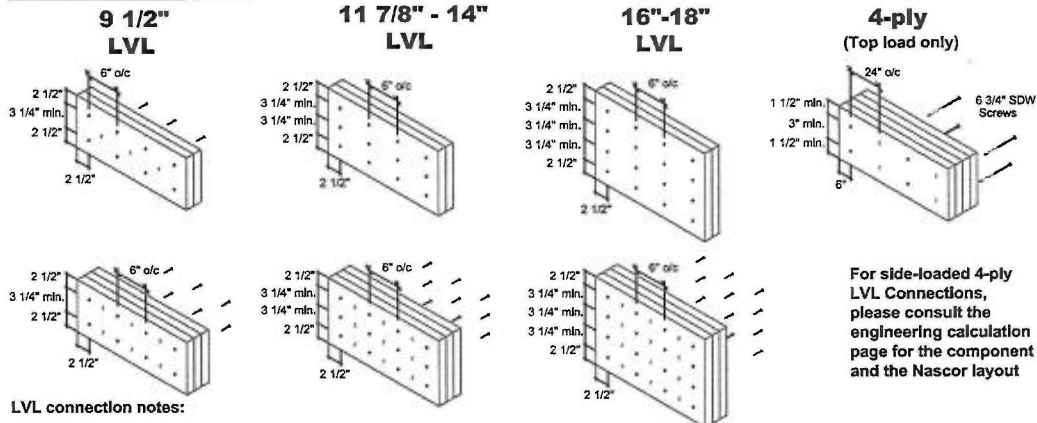
Conventional Connections (for uniform distributed loads)



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)

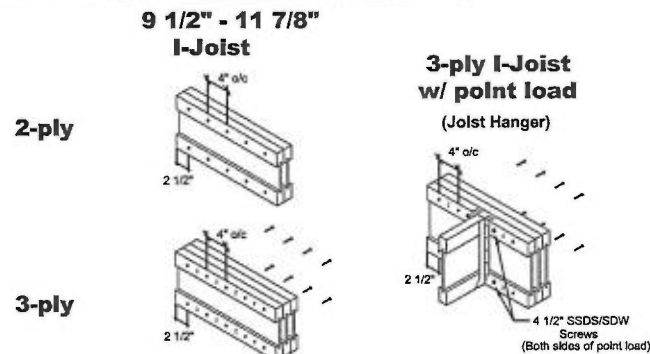


LVL connection notes:

- 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.

MULTI-PLY
CONNECTION
DETAILS

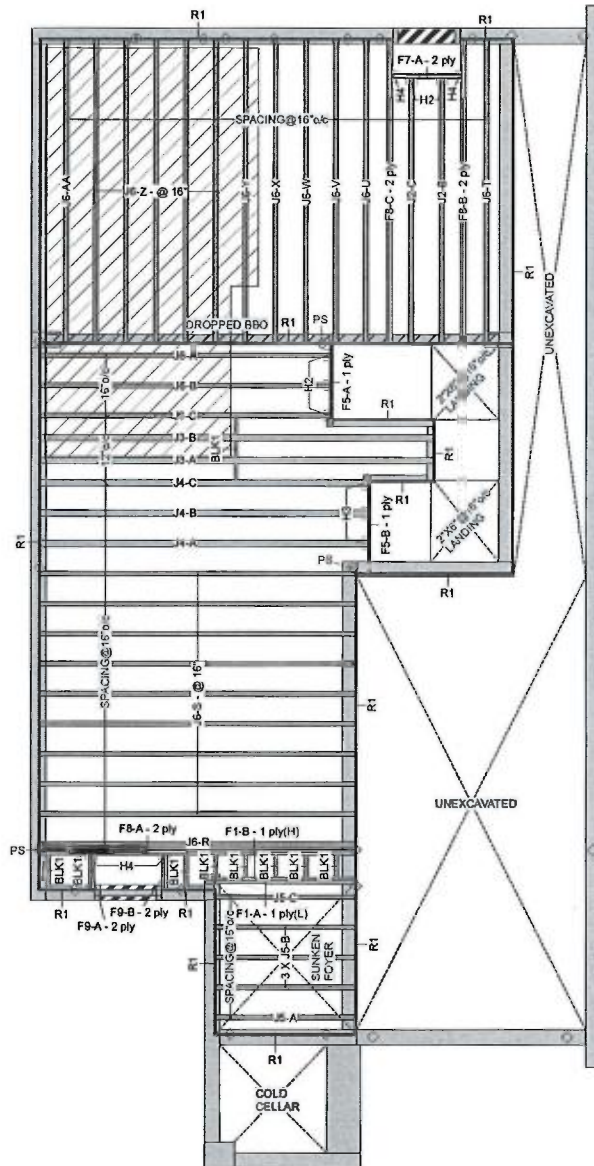
Date: November 30, 2016

Scale: NTS

KOTT

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

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.

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



September 13, 2018

Ground Floor

LV/LSL (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			2	8-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	9.5			2	6-0-0

Joist (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F8	NJ	1.5	9.5	3	2	6	14-0-0
F7	NJ	1.5	9.5	1	2	2	4-0-0
F9	NJ	1.5	9.5	2	2	4	2-0-0
J3	NJ60U	3.5	9.5			2	18-0-0
J4	NJ60U	3.5	9.5			3	18-0-0
J6	NJH	2.5	9.5			25	14-0-0
J2	NJH	2.5	9.5			2	12-0-0
J5	NJH	2.5	9.5			6	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			13	12

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H2	6	LT259			4 10dx1 1/2	2 10dx1 1/2
H3	3	MT49.5			4 10dx1 1/2	4 10dx1 1/2
H4	4	LT2-169			4 10dx1 1/2	2 10dx1 1/2

Blocking

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
BLK1	NJH	2.5	9.5	LnFt		Varies	12-0-0

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 frame'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"x4" 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 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:

JARDIN DESIGN GROUP INC.
 64 Jardin Dr, Suite 3A
 Date: Rev. 1, 4/28/2018
 Project No: 2645
 Model: Clover 1A, Elevation 1

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-1310(C)

Legend

PS	Point Load Support
○	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

NASCOR

Layout Name
 CLOVER 1-ELEV 1

Design Method
 LSD

Description
 Created
 June 25, 2018

Builder
 GREENPARK

Sales Rep
 RM

Designer
 RO

Shipping
 Project

Builder's Project
 Kott Lumber Company

14 Anderson Blvd
 Stouffville, Ontario

Canada
 K9H7V1

905-642-4400

Job Path
 S:\CUSTOMERS\GREENPARK

MINISALE HOMES\MODELS\BLOCK

310C\CLOVER 1A\FLOORS\CLOVER

ELEV 1.dwg

Ground Floor

Design Method
 LSD

Building Code
 NBCC 2010 / OBC

2012

Floor

Live

Dead

Deflection Joist

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

Deflection Girder

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

Decking

Deck

Thickness

Fastener

Vibration

Strapping

1"x4", 1 Row at

Midspan

SPF Plywood

3/4"

Nailed & Glued

1"x4", 1 Row at

Midspan

SPF Plywood

3/4"

Nailed & Glued

1"x4", 1 Row at

Midspan

SPF Plywood

3/4"

Nailed & Glued

1"x4", 1 Row at

Midspan

SPF Plywood

3/4"

Nailed & Glued

1"x4", 1 Row at

Midspan

SPF Plywood

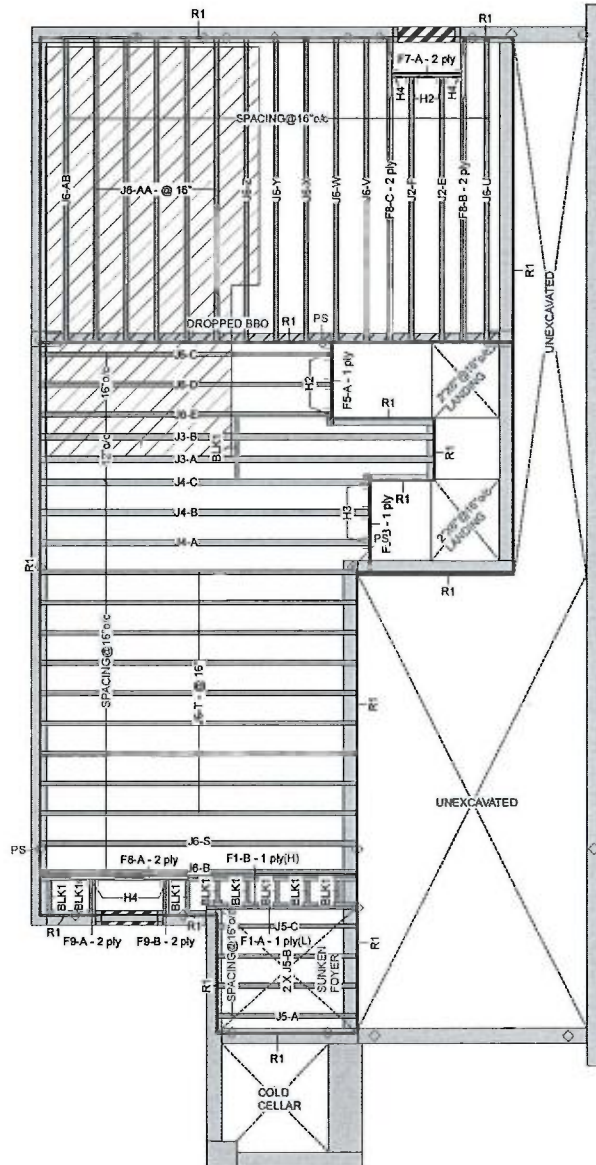
3/4"

Nailed & Glued

1"x4", 1 Row at

Midspan

Ground Floor



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

This certification is to confirm that:
1. The loads used in the calculation of the
attached approved components conform to the
floor assembly shown on this layout.
2. The floor joists comply with the Nascor
span table for the loads and spacing shown on
this layout.
The floor system must be assembled in
accordance to the Nascor Specifier Guide.
Multi-ply members must be attached together
as per the included multiple member
connection detail.
All other components and structural elements
supporting the floor system such as beams,
walls, columns and foundation walls and
footings including anchorage of components
and bracing for lateral stability are the
responsibility of others.



September 13, 2018

Ground Floor LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			2	8-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	9.5			2	8-0-0

Joist (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F8	NJ	1.5	9.5	3	2	6	14-0-0
F7	NJ	1.5	9.5	1	2	2	4-0-0
F9	NJ	1.5	9.5	2	2	4	2-0-0
J3	NJ60U	3.5	9.5			2	18-0-0
J4	NJ60U	3.5	9.5			3	18-0-0
J6	NJH	2.5	9.5			28	14-0-0
J2	NJH	2.5	9.5			2	12-0-0
J5	NJH	2.5	9.5			4	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			13	12

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H2	5	LT259			4 10dx1 1/2	2 10dx1 1/2
H3	3	MIT49.5			4 10dx1 1/2	4 10dx1 1/2
H4	4	LT2-159			4 10dx1 1/2	2 10dx1 1/2

Blocking

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
BLK1	NJH	2.5	9.5	LnFt		Varies	12-0-0

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"oc under parallel non-load bearing walls.
4. Install single-ply flush window header along inside face of rimboard/rinjoist.
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 frame'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"x4" block (1/16" longer than rim depth @ 16"oc). 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 are 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:

JARDIN DESIGN GROUP INC.
64 Jardin Dr, Suite 3A
Date: Rev. 1, 4/28/2018
Project No: 2845
Model: Clover 1A, Elevation 2

1. OBC 2012 O Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC-14058-R
4. CAN/CSA-C86-09
5. CCMC-12787-R APA PR-L310(C)

Legend

PS	Point Load Support
○	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

NASCOR

Layout Name
CLOVER 1-ELEV 2

Design Method
LSD

Description

Created
June 25, 2018

Builder
GREENPARK

Sales Rep
R M

Designer
R O

Shipping

Project
Builder's Project

Kott Lumber Company
14 Anderson Blvd
Stouffville, Ontario
Canada
K2H7V1
905-642-4400

Job Path
S:\CUSTOMERS\GREENPARK
MINNISALE HOMES\MODELS\BLOCK
318\CLOVER 1A\FLOORSELEV. 2
CLOVER 1-ELEV 2.dwg

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/
240

Decking

Deck
SPF Plywood

Thickness
3/4"

Fastener
Nailed & Glued

Vibration

Strapping
1" X 4", 1 Row at
Midspan

KOTT



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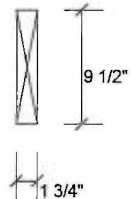
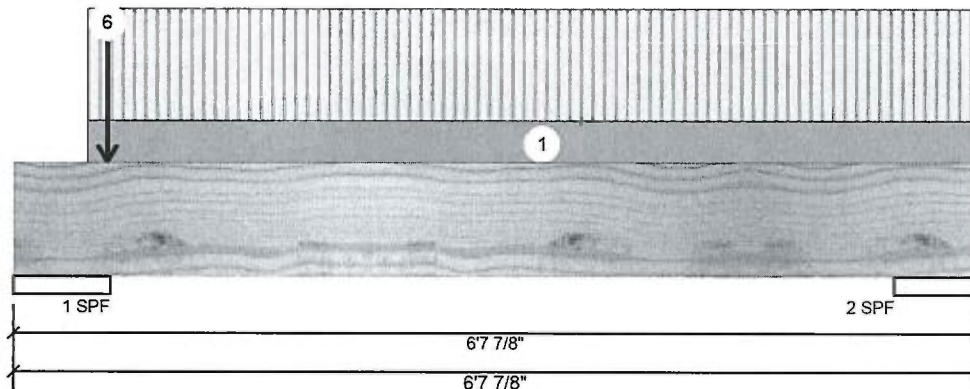
Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: R O
Job Name: CLOVER 1-ELEV 1
Project #:

Page 1 of 1

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

Level: Ground Floor

**Member Information**

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	38	462	255	0
2	44	29	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	8.000"	23%	578 / 383	960	L	1.25D+1.5S
2 - SPF	6.875"	2%	36 / 66	102	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	119 ft-lb	3'4 1/2"	7385 ft-lb	0.016 (2%)	1.25D+1.5L	L
Unbraced	119 ft-lb	3'4 1/2"	6053 ft-lb	0.020 (2%)	1.25D+1.5L	L
Shear	61 lb	5'4 1/4"	3015 lb	0.020 (2%)	1.25D+1.5L	L
Perm Def in.	0.001 (L/67760)	3'4 1/2"	0.185 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.001 (L/44790)	3'4 1/2"	0.185 (L/360)	0.010 (1%)	L+0.5S	L
TL Defl inch	0.002 (L/26965)	3'4 1/2"	0.277 (L/240)	0.010 (1%)	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 Top braced at bearings.
- 4 Bottom braced at bearings.



September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-6-2 to 6-7-14	(Span)0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-7-12		Top	397 lb	0 lb	240 lb	0 lb	BBO1 BBO1
3	Point	0-7-12		Top	6 lb	0 lb	13 lb	0 lb	
4	Point	0-7-12		Top	29 lb	0 lb	0 lb	0 lb	Wall Self Weight
5	Point	0-7-12		Top	1 lb	0 lb	2 lb		
6	Point	0-7-12		Top	2 lb	0 lb	0 lb		
	Self Weight				4 PLF				

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.

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, multiple fastening details, beam strength values, and 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

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

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

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT NASCOR

This design is valid until 7/10/2021





isDesign™

Client: GREENPARK

Project:

Address:

Date: 9/7/2018

Designer: R O

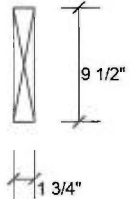
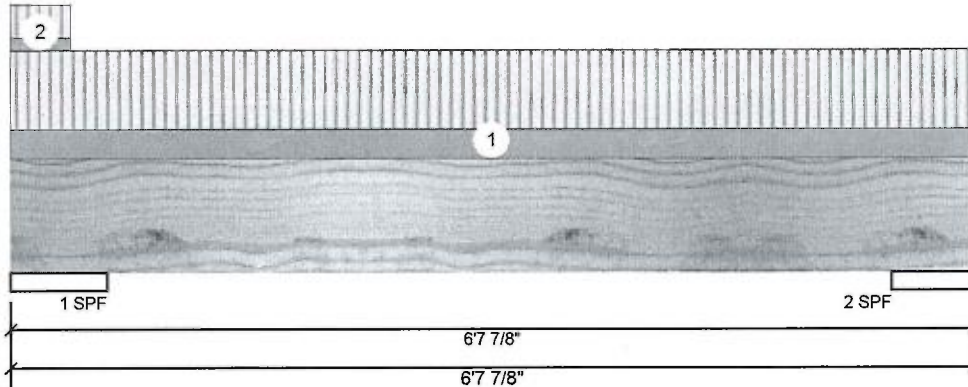
Job Name: CLOVER 1-ELEV 1

Project #:

Page 1 of 1

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

Level: Ground Floor

**Member Information**

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 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	83	44	0	0
2	77	41	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	8.000"	2%	55 / 125	180	L	1.25D+1.5L
2 - SPF	6.875"	2%	52 / 116	168	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	196 ft-lb	3' 4 1/2"	11362 ft-lb	0.017 (2%)	1.25D+1.5L	L
Unbraced	196 ft-lb	3' 4 1/2"	6727 ft-lb	0.029 (3%)	1.25D+1.5L	L
Shear	101 lb	1' 4 3/4"	4638 lb	0.022 (2%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/47210)	3' 4 1/2"	0.185 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.003 (L/25344)	3' 4 1/2"	0.185 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.004 (L/16491)	3' 4 1/2"	0.277 (L/240)	0.010 (1%)	D+L	L

Design Notes

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



September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 6-7-14	(Span)1-2-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-5-0	(Span)0-5-13	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

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.

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
K2H7V1
905-642-4400

KOTT NASCOR

This design is valid until 7/10/2021





isDesign™

Client: GREENPARK

Project:

Address:

Date: 9/7/2018

Designer: R O

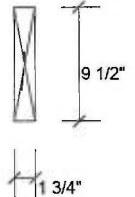
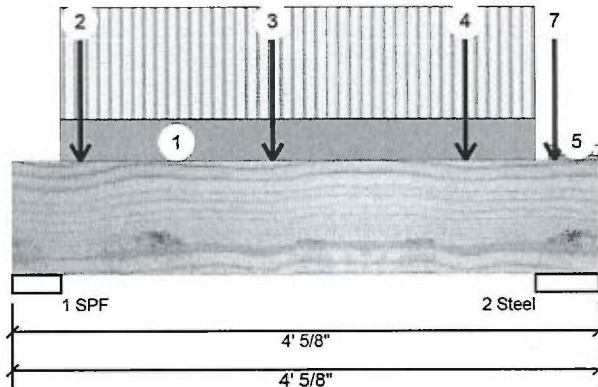
Job Name: CLOVER 1-ELEV 1

Project #:

Page 1 of 1

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

Level: Ground Floor

**Member Information**

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 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	900	368	0	0
2	859	374	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	42%	460 / 1350	1810	L	1.25D+1.5L
2 - Steel	5.250"	26%	467 / 1288	1755	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1450 ft-lb	1'9 5/8"	11362 ft-lb	0.128 (13%)	1.25D+1.5L	L
Unbraced	1450 ft-lb	1'9 5/8"	9529 ft-lb	0.152 (15%)	1.25D+1.5L	L
Shear	1460 lb	1' 3/4"	4638 lb	0.315 (31%)	1.25D+1.5L	L
Perm Defl in.	0.004 (L/9422)	1'9 7/8"	0.114 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.011 (L/3831)	1'9 15/16"	0.114 (L/360)	0.090 (9%)	L	L
TL Defl inch	0.015 (L/2724)	1'9 15/16"	0.170 (L/240)	0.090 (9%)	D+L	L

Design Notes

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



September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-4-0 to 3-7-6		Top	90 PLF	240 PLF	0 PLF	0 PLF	
2	Point	0-5-10		Far Face	125 lb	298 lb	0 lb	0 lb	J6
3	Point	1-9-10		Far Face	144 lb	341 lb	0 lb	0 lb	J6
4	Point	3-1-10		Far Face	100 lb	237 lb	0 lb	0 lb	J6
5	Tie-In	3-8-8 to 4-0-10	(Span)1-1-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	3-9-0		Top	33 lb	87 lb	0 lb	0 lb	
7	Point	3-9-0		Top	26 lb	0 lb	0 lb	0 lb	
	Self Weight								

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

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.

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

Handing & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, 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

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

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT NASCOR

This design is valid until 7/10/2021





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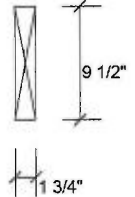
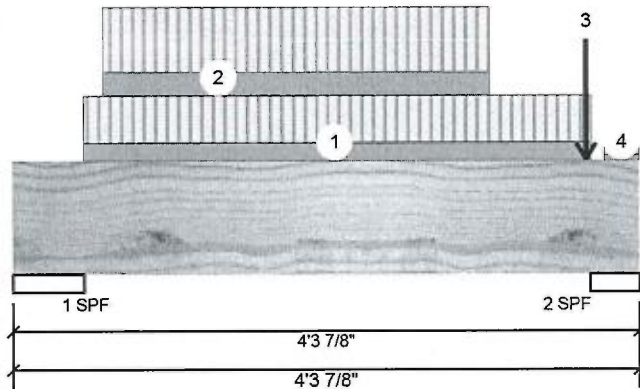
Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: R O
Job Name: CLOVER 1-ELEV 1
Project #:

Page 1 of 1

F5-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	821	316	0	0
2	1036	397	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.875"	26% 395 / 1232	1627 L	1.25D+1.5L
2 - SPF	4.000"	48% 496 / 1554	2050 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1564 ft-lb	2'2 9/16"	11362 ft-lb	0.138 (14%)	1.25D+1.5L	L
Unbraced	1564 ft-lb	2'2 9/16"	9286 ft-lb	0.168 (17%)	1.25D+1.5L	L
Shear	2036 lb	3'3 1/8"	4638 lb	0.439 (44%)	1.25D+1.5L	L
Perm Defl in.	0.005 (L/8801)	2'2 11/16"	0.121 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.013 (L/3369)	2'2 11/16"	0.121 (L/360)	0.110 (11%)	L	L
TL Defl inch	0.018 (L/2436)	2'2 11/16"	0.181 (L/240)	0.100 (10%)	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	Part. Uniform	0-5-14 to 3-11-14		Top	79 PLF	210 PLF	0 PLF	0 PLF
2	Part. Uniform	0-7-8 to 3-3-8		Far Face	108 PLF	289 PLF	0 PLF	0 PLF
3	Point	3-11-8		Far Face	127 lb	338 lb	0 lb	0 lb J4
4	Tie-In	4-1-0 to 4-3-14	(Span)2-10-5	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

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.



September 13, 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 preservative

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
K2H7V1
905-642-4400

KOTT NASCOR

This design is valid until 7/10/2021





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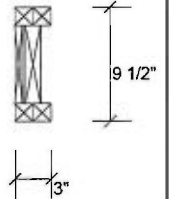
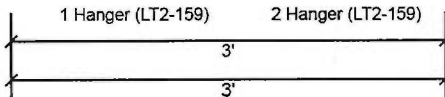
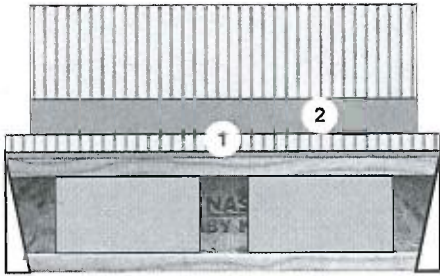
Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: R O
Job Name: CLOVER 1-ELEV 1
Project #:

Page 1 of 1

F7-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	316	118	0	0
2	319	119	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	24%	148 / 474	622 L		1.25D+1.5L
2 - Hanger	2.000"	24%	149 / 479	628 L		1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	447 ft-lb	1'6"	7340 ft-lb	0.061 (6%)	1.25D+1.5L	L
Unbraced	447 ft-lb	1'6"	4678 ft-lb	0.096 (10%)	1.25D+1.5L	L
Shear	621 lb	2'10 3/4"	3080 lb	0.202 (20%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/25134)	1'6"	0.093 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.004 (L/9398)	1'6"	0.093 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.005 (L/6840)	1'6"	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.



September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-0-0	(Span)1-9-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-2-2 to 2-10-2		Near Face	74 PLF	198 PLF	0 PLF	0 PLF	

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

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

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.

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.

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

Manufacturer Info

Nascor by Kott

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT NASCOR

This design is valid until 7/10/2021





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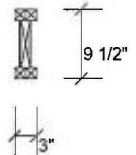
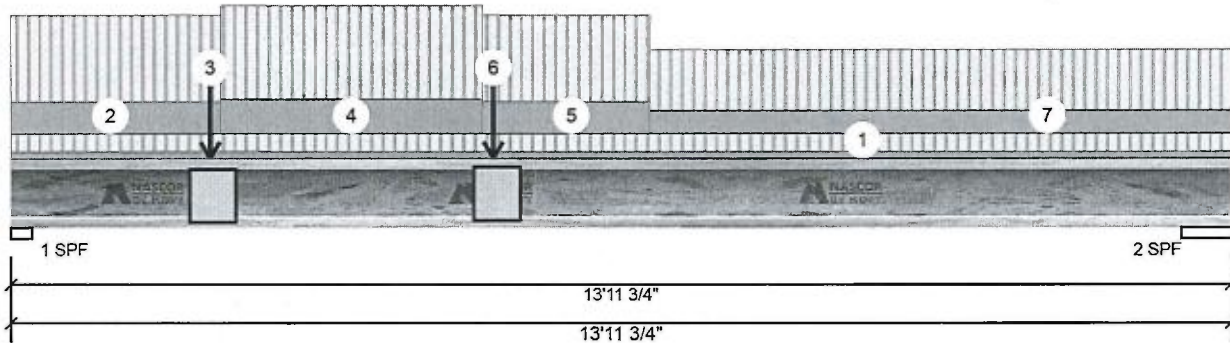
Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: R O
Job Name: CLOVER 1-ELEV 1
Project #:

Page 1 of 1

F8-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	366	137	0	0
2	272	102	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.875"	26%	171 / 549	720	L	1.25D+1.5L
2 - SPF	6.875"	17%	128 / 408	536	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2090 ft-lb	5'7 1/16"	7340 ft-lb	0.285 (28%)	1.25D+1.5L	L
Unbraced	2090 ft-lb	5'7 1/16"	2107 ft-lb	0.992 (99%)	1.25D+1.5L	L
Shear	706 lb	2 1/8"	3080 lb	0.229 (23%)	1.25D+1.5L	L
Perm Defl in.	0.048 (L/3301)	6'6 3/4"	0.443 (L/360)	0.110 (11%)	D	Uniform
LL Defl inch	0.129 (L/1238)	6'6 3/4"	0.443 (L/360)	0.290 (29%)	L	L
TL Defl inch	0.177 (L/900)	6'6 3/4"	0.665 (L/240)	0.270 (27%)	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 4'7" o.c.
- 5 Bottom flange braced at bearings.



September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-11-12	(Span)0-4-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 2-4-14	(Span)1-7-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	2-3-6		Near Face	31 lb	84 lb	0 lb	0 lb	F9
4	Tie-In	2-4-14 to 5-4-14	(Span)1-9-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	5-4-14 to 7-3-14	(Span)1-7-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	5-6-6		Near Face	19 lb	50 lb	0 lb		
7	Tie-In	7-3-14 to 13-11-12	(Span)1-2-2	Top	15 PSF	40 PSF	0 PSF		

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

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.

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, and installation chart, bridging details, multi-ply fastening details and handling/erection 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.

Refer to Multiple Ply Joist Connection Detail for blocking and bracing requirements

Manufacturer Info

Nascor by Kott

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT NASCOR

This design is valid until 7/10/2021





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Client: GREENPARK

Project:

Address:

Date: 9/7/2018

Designer: R O

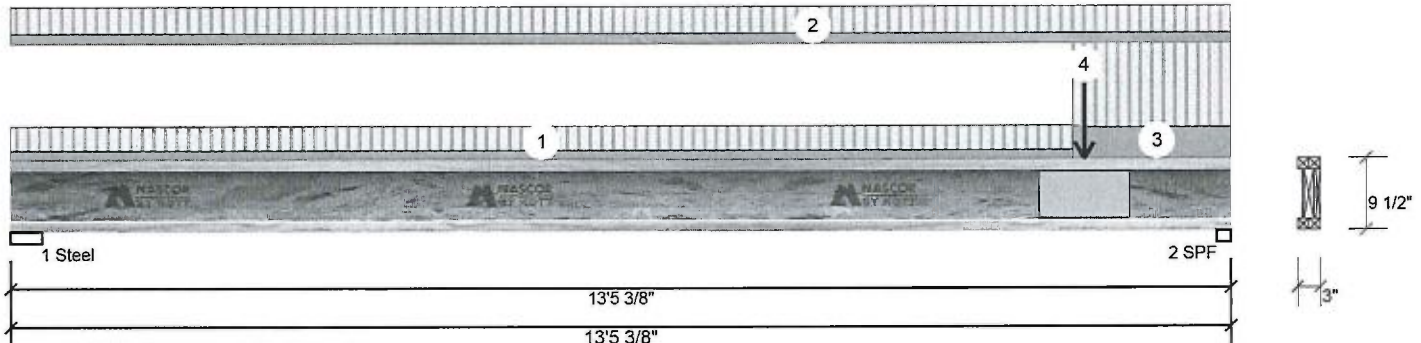
Job Name: CLOVER 1-ELEV 1

Project #:

Page 1 of 1

F8-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	315	118	0	0
2	622	233	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Steel	4.125"	20%	147 / 472	619	L	1.25D+1.5L
2 - SPF	1.875"	48%	291 / 934	1225	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2264 ft-lb	7'10 3/8"	7340 ft-lb	0.308 (31%)	1.25D+1.5L	L
Unbraced	2264 ft-lb	7'10 3/8"	2268 ft-lb	0.998 (100%)	1.25D+1.5L	L
Shear	1209 lb	13'4 1/4"	3080 lb	0.392 (39%)	1.25D+1.5L	L
Perm Defl in.	0.053 (L/2956)	7'1 5/16"	0.436 (L/360)	0.120 (12%)	D	Uniform
LL Defl inch	0.142 (L/1107)	7'1 5/16"	0.436 (L/360)	0.330 (33%)	L	L
TL Defl inch	0.195 (L/805)	7'1 5/16"	0.654 (L/240)	0.300 (30%)	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 4'5" o.c.
- 5 Bottom flange braced at bearings.



September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 11-8-8	(Span)0-11-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 13-5-6	(Span)1-0-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	11-8-8 to 13-5-6	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	11-10-0		Far Face	119 lb	319 lb	0 lb	0 lb	F7

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

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.

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/erection 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.

Manufacturer Info

Nascor by Kott

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT NASCOR

This design is valid until 7/10/2021





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Client: GREENPARK

Project:

Address:

Date: 9/7/2018

Designer: R O

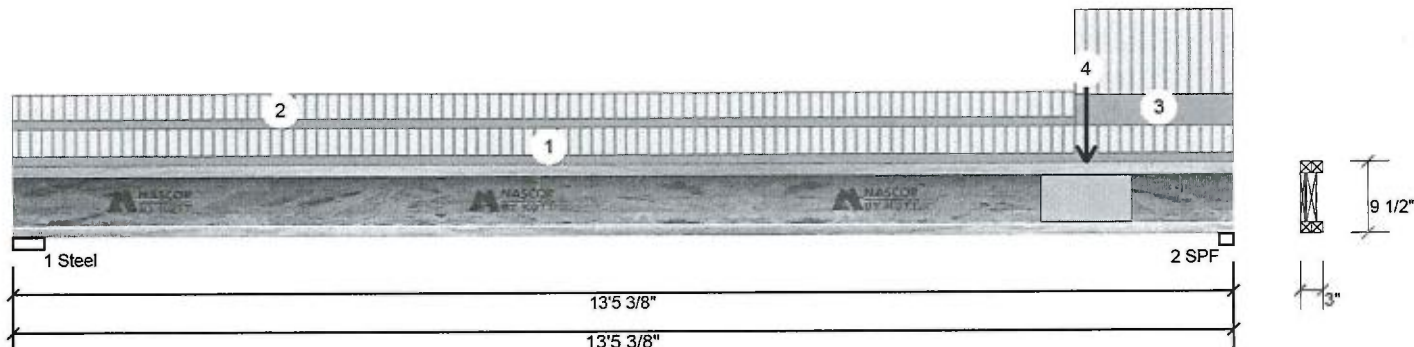
Job Name: CLOVER 1-ELEV 1

Project #:

Page 1 of 1

F8-C NJ 9.500" 2-Ply - PASSED

Level: Ground Floor

**Member Information**

Type:	Girder	Application:	Floor (Residential)
Piles:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 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	314	118	0	0
2	619	232	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - Steel	4.125"	20% 147 / 471	619 L	1.25D+1.5L
2 - SPF	1.875"	47% 290 / 929	1218 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2258 ft-lb	7'10 1/4"	7340 ft-lb	0.308 (31%)	1.25D+1.5L	L
Unbraced	2258 ft-lb	7'10 1/4"	2268 ft-lb	0.996 (100%)	1.25D+1.5L	L
Shear	1203 lb	13'4 1/4"	3080 lb	0.390 (39%)	1.25D+1.5L	L
Perm Defl in.	0.053 (L/2963)	7'1 5/16"	0.436 (L/360)	0.120 (12%)	D	Uniform
LL Defl inch	0.141 (L/1110)	7'1 5/16"	0.436 (L/360)	0.320 (32%)	L	L
TL Defl inch	0.194 (L/807)	7'1 5/16"	0.654 (L/240)	0.300 (30%)	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 4'5" o.c.
- Bottom flange braced at bearings.



September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-5-6	(Span)1-0-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 11-8-8	(Span)0-11-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	11-8-8 to 13-5-6	(Span)3-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	11-10-0		Near Face	118 lb	316 lb	0 lb	0 lb F7	

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

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.

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 proper drainage to prevent ponding

Manufacturer Info

Nascor by Kott

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT NASCOR

This design is valid until 7/10/2021





isDesign™

Client: GREENPARK

Project:

Address:

Date: 9/7/2018

Designer: R O

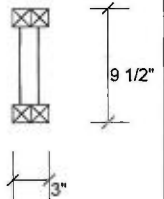
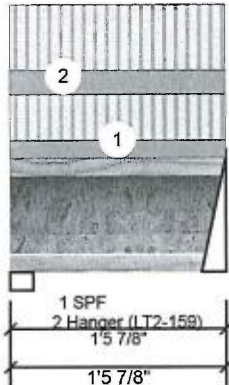
Job Name: CLOVER 1-ELEV 1

Project #:

Page 1 of 1

F9-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	83	31	0	0
2	84	31	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	1.875"	6%	39 / 124	162	L	1.25D+1.5L
2 - Hanger	2.000"	6%	39 / 126	165	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	46 ft-lb	8 7/8"	7340 ft-lb	0.006 (1%)	1.25D+1.5L	L
Unbraced	46 ft-lb	8 7/8"	6948 ft-lb	0.007 (1%)	1.25D+1.5L	L
Shear	142 lb	1 1/8"	3080 lb	0.046 (5%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/56750)	8 7/8"	0.043 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.000 (L/41273)	8 7/8"	0.065 (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.



September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-5-14	(Span)2-3-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-5-14	(Span)3-3-0	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

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.

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 proper drainage to prevent ponding

Manufacturer Info

Nascor by Kott

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT NASCOR

This design is valid until 7/10/2021





isDesign™

Client: GREENPARK

Project:

Address:

Date: 9/7/2018

Designer: R O

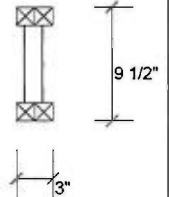
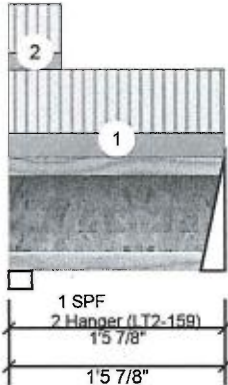
Job Name: CLOVER 1-ELEV 1

Project #:

Page 1 of 1

F9-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	64	24	0	0
2	50	19	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	1.875"	5%	30 / 97	127 L
2 - Hanger	2.000"	4%	24 / 75	99 L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	28 ft-lb	8 5/8"	7340 ft-lb	0.004 (0%)	1.25D+1.5L	L
Unbraced	28 ft-lb	8 5/8"	6948 ft-lb	0.004 (0%)	1.25D+1.5L	L
Shear	106 lb	1 1/8"	3080 lb	0.034 (3%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		

Design Notes

- 1 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.



September 13, 2018

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

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.

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.

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

Manufacturer Info

Nascor by Kott

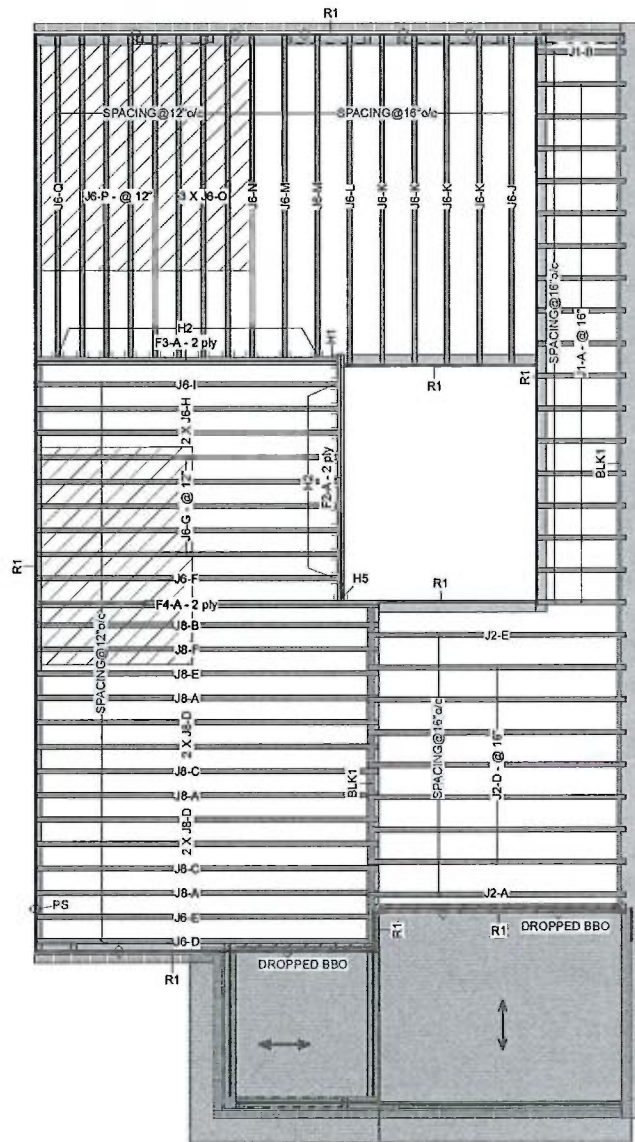
Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



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.



September 13, 2018

Second Floor
Joist (Flush)

Label	Description	Width	Depth	Qty	Pieces	Pcs	Length
J6	NJH	2.5	9.5			12	16-0-0
J6	NJH	2.5	9.5			28	14-0-0
J2	NJH	2.5	9.5			9	12-0-0
J1	NJH	2.5	9.5			18	4-0-0

LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Pieces	Pcs	Length
F4	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	16-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	14-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	12-0-0

Rim Board

Label	Description	Width	Depth	Qty	Pieces	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			11	12

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	1	HGUS410			45 16d	16 16d
H2	20	LT259			4 10d x 1 1/2	2 10d x 1 1/2
H5	1	HGUS410			30 16d	10 16d

Blocking

Label	Description	Width	Depth	Qty	Pieces	Pcs	Length
BLK1	NJH	2.5	9.5	1in ft		Varies	41-0-0

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 @ 2'4\"/>

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

Rim parallel to joists: 1-1/8\"/>

Hatch are 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:

JARDIN DESIGN GROUP INC.
64 Jardin Dr, Suite 3A
Date: Rev. 1, 4/26/2018
Project No: 2645
Model: Millwood 2, Elevation 1

1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC - 14058-R
4. CAN/CSA-O86-09
5. CCMC - 12787-RAPA PRL-310(C)

Legend

PS	Point Load Support
◊	Load from Above
	Wall
	Wall Opening
	Norbord Rimboard Plus 1.125 X 9.5
	NJ 9.5
	NJ80U 9.5
	NJH 9.5
	Forex 2.0E-3000Fb LVL 1.75 X 9.5

NASCOR

Layout Name
CLOVER 1-ELEV 1Design Method
LSD

Description

Created
June 25, 2018Builder
GREENPARKSales Rep
RMDesigner
ROShipping
Project

Builder's Project

Kott Lumber Company

14 Anderson Blvd

Stouffville, Ontario

Canada

K2HTV1

905-642-4400

Job Path

S:\CUSTOMERS\GREENPARK
WINNISALE HOMES\MODELS\BLOCK
316\CLOVER 1A\FLOORS\CLOVER
ELEV 1.lvl

Second Floor

Design Method LSD

Building Code NBC 2010 / OBC 2012

Floor

Loads

Live

Dead

Deflection Joist

LL Span 1/

TL Span 1/

LL Cant 2U/

TL Cant 2U/

Deflection Girder

LL Span 1/

LL Span 1/

LL Cant 2U/

TL Cant 2U/

Decking

Deck

Thickness

Fastener

Vibration

Ceiling:

Gypsum 1/2"

SPF Plywood

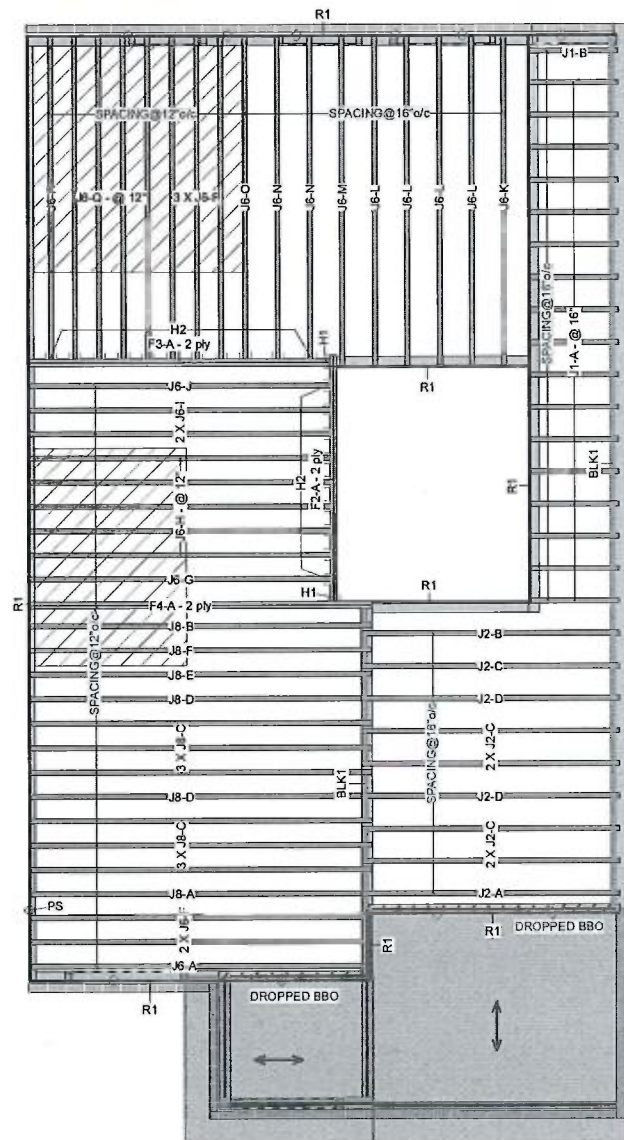
5/8"

Nailed & Glued

Gypsum 1/2"

KOTT

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.



September 13, 2018

Second Floor
(Joist (Flush))

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
J6	NJH	2.5	9.5			12	16-0-0
J6	NJH	2.5	9.5			29	14-0-0
J2	NJH	2.5	9.5			9	12-0-0
J1	NJH	2.5	9.5			18	4-0-0

LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F4	Forex	1.75	9.5	1	2	2	16-0-0
F3	Forex	1.75	9.5	1	2	2	14-0-0
F2	Forex	1.75	9.5	1	2	2	12-0-0

Rim Board

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			11	12

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	Supported Member
H1	2	HGU5410			48 16d	16 16d
H2	20	LT259			4 10dx1 1/2	2 10dx1 1/2

Blocking

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	41-0-0

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/rinjoist.
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 frame'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"x4" 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 is 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:

JARDIN DESIGN GROUP INC.
64 Jardin Dr, Suite 3A
Date: Rev. 1, 4/26/2018
Project No: 2645
Model: Millwood 2, Elevation 2

1. OGC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC - 14056-R
4. CAN/CSA-O89-09
5. CCMC-12787-R APA PR-L310(C)

Legend

PS	Point Load Support
○	Load from Above
▨	Wall
▧	Wall Opening
▩	Norbord Rimboard Plus 1.125 X 9.5
▪	NJ 9.5
▫	NJ80U 9.5
▬	NJH 9.5
▭	Forex 2.0E-3000Fb LVL 1.75 X 9.5

NASCOR

Layout Name
CLOVER 1-ELEV 2

Design Method
LSD

Description

Created
June 25, 2018

Builder
GREENPARK

Sales Rep
R.M

Designer
R.O

Shipping

Project

Builder's Project

Kott Lumber Company

14 Anderson Blvd

Stouffville, Ontario

Canada

K2H7V1

905-642-4400

Job Path

S:\CUSTOMERS\GREENPARK

MINISALE HOMES\MODELS\BLOCK

316\CLOVER 1A\FLOORS\ELEV. 2

1\CLOVER 1-ELEV 2.lid

Second Floor

Design Method

Building Code

Floor

Loads

Live

Dead

Deflection Joist

LL Span 1/

TL Span 1/

LL Cant 2/

TL Cant 2/

Deflection Girder

LL Span 1/

TL Span 1/

LL Cant 2/

TL Cant 2/

Decking

Deck

Thickness

Fastener

Vibration

Ceiling

Gypsum 1/2"

KOTT



isDesign™

Client: GREENPARK

Project:

Address:

Date: 9/7/2018

Designer: R O

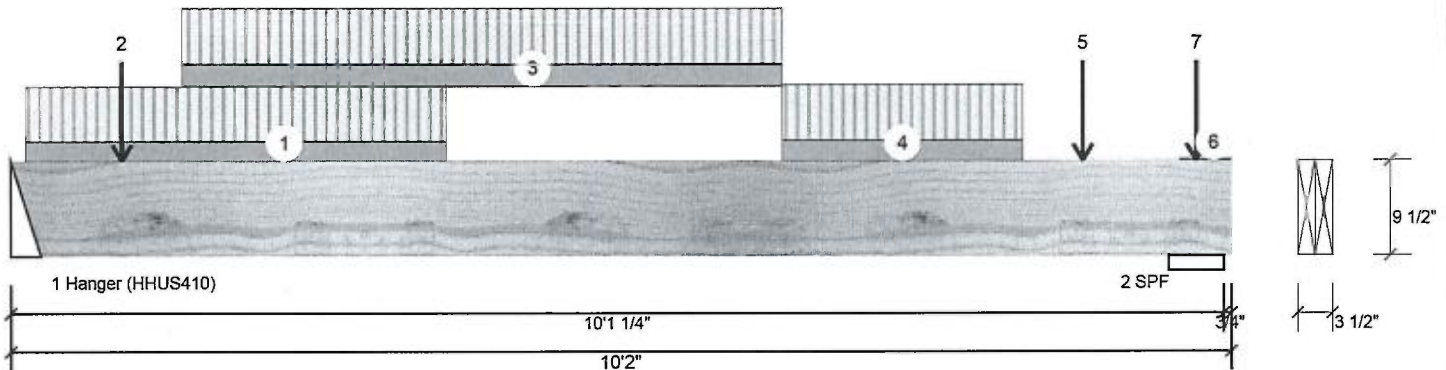
Job Name: CLOVER 1-ELEV 1

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	1837	754	0	0
2	2943	1248	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	47%	942 / 2755	3697 L	1.25D+1.5L
2 - SPF	5.500"	50%	1560 / 4414	5974 LL	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7339 ft-lb	4'5 1/4"	22724 ft-lb	0.323 (32%)	1.25D+1.5L	L
Unbraced	7339 ft-lb	4'5 1/4"	20871 ft-lb	0.352 (35%)	1.25D+1.5L	L
Shear	3284 lb	11 3/4"	9277 lb	0.354 (35%)	1.25D+1.5L	L
Perm Defl in.	0.056 (L/2062)	4'10 9/16"	0.323 (L/360)	0.170 (17%)	D	Uniform
LL Defl inch	0.136 (L/854)	4'10 9/16"	0.323 (L/360)	0.420 (42%)	L	L
TL Defl inch	0.193 (L/604)	4'10 9/16"	0.484 (L/240)	0.400 (40%)	D+L	L
LL Cant	-0.002 (2L/608)	Rt Cant	0.200 (2L/480)	0.012 (1%)	L	L
TL Cant	-0.003 (2L/430)	Rt Cant	0.300 (2L/240)	0.012 (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 braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.



September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-1-8 to 3-7-8		Top	90 PLF	240 PLF	0 PLF	0 PLF	
2	Point	0-11-2		Far Face	104 lb	256 lb	0 lb		
3	Part. Uniform	1-5-2 to 6-5-2		Far Face	99 PLF	247 PLF	0 PLF		

Continued on page 2...

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

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.

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, 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 water ponding.
Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT NASCOR

This design is valid until 7/10/2021





isDesign™

Client: GREENPARK

Project:

Address:

Date: 9/7/2018

Designer: R O

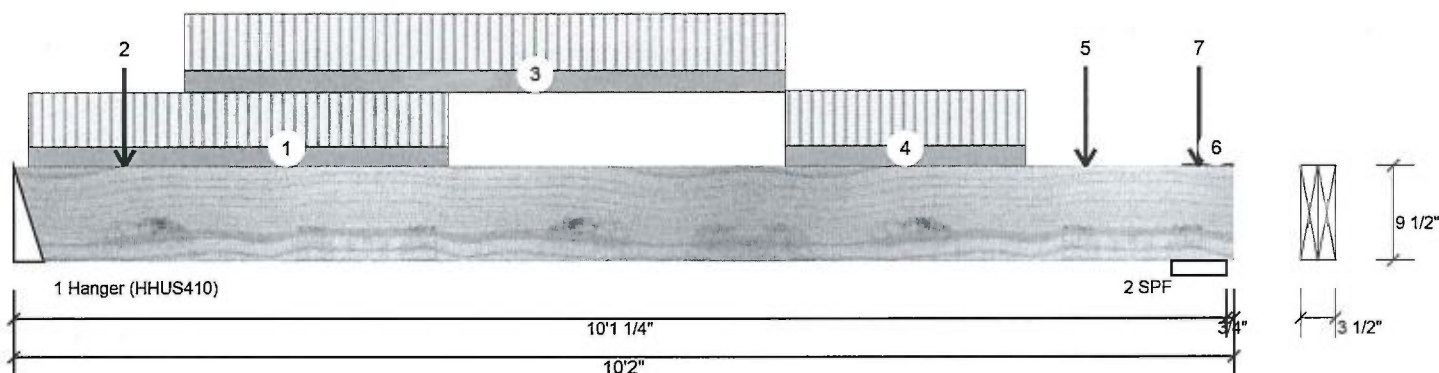
Job Name: CLOVER 1-ELEV 1

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
4	Part. Uniform	6-5-2 to 8-5-2		Far Face	92 PLF	247 PLF	0 PLF	0 PLF	
5	Point	8-11-2		Far Face	90 lb	240 lb	0 lb	0 lb	J6
6	Tie-In	9-8-14 to 10-2-0	(Span)0-4-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Point	9-10-8		Far Face	735 lb	1711 lb	0 lb	0 lb	F3
	Self Weight				8 PLF				



September 13, 2018

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

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.

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
K2H7V1
905-642-4400

KOTT NASCOR

This design is valid until 7/10/2021





isDesign™

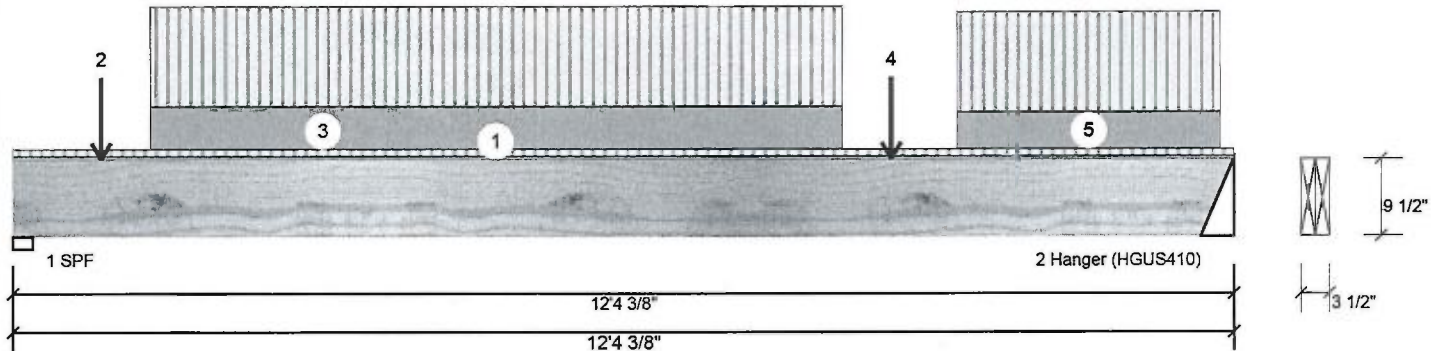
Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: R O
Job Name: CLOVER 1-ELEV 1
Project #:

Page 1 of 1

F3-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	1604	723	0	0
2	1711	735	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	2.375"	65%	904 / 2407	3310 L 1.25D+1.5L
2 - Hanger	4.000"	34%	918 / 2566	3484 L 1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	10302 ft-lb	6'1 3/8"	22724 ft-lb	0.453 (45%)	1.25D+1.5L	L
Unbraced	10302 ft-lb	6'1 3/8"	19900 ft-lb	0.518 (52%)	1.25D+1.5L	L
Shear	3674 lb	11 1/8"	9277 lb	0.396 (40%)	1.25D+1.5L	L
Perm Defl in.	0.122 (L/1174)	6'1 1/4"	0.399 (L/360)	0.310 (31%)	D	Uniform
LL Defl inch	0.275 (L/522)	6'1 3/8"	0.399 (L/360)	0.690 (69%)	L	L
TL Defl inch	0.397 (L/361)	6'1 3/8"	0.598 (L/240)	0.660 (66%)	D+L	L

Design Notes

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



September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-4-6	(Span)0-11-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-10-12		Far Face	109 lb	253 lb	0 lb	0 lb	J6
3	Part. Uniform	1-4-12 to 8-4-12		Far Face	112 PLF	261 PLF	0 PLF	0 PLF	
4	Point	8-10-12		Far Face	121 lb	305 lb	0 lb	0 lb	J6
5	Part. Uniform	9-6-12 to 12-2-12		Far Face	98 PLF	261 PLF	0 PLF	0 PLF	
	Self Weight				8 PLF				

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

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.

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, 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

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

Manufacturer Info

Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

KOTT NASCOR

This design is valid until 7/10/2021





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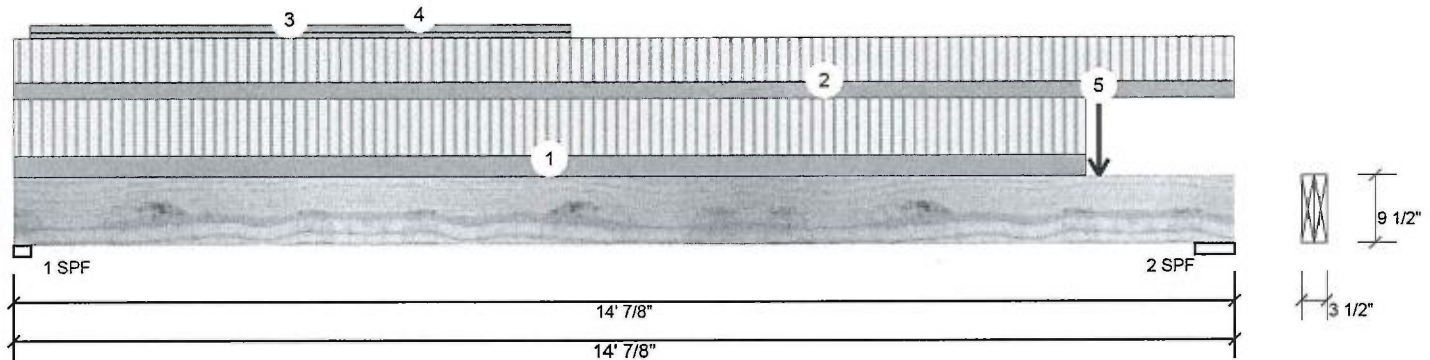
Client: GREENPARK
Project:
Address:

Date: 9/7/2018
Designer: R O
Job Name: CLOVER 1-ELEV 1
Project #:

Page 1 of 1

F4-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)
Piles:	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	422	240	0	0
2	1918	841	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	2.375"	18%	300 / 632	933 L 1.25D+1.5L
2 - SPF	5.500"	33%	1051 / 2877	3928 L 1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4703 ft-lb	10'6 3/16"	22724 ft-lb	0.207 (21%)	1.25D+1.5L	L
Unbraced	4703 ft-lb	10'6 3/16"	19102 ft-lb	0.246 (25%)	1.25D+1.5L	L
Shear	3877 lb	12'10 5/8"	9277 lb	0.418 (42%)	1.25D+1.5L	L
Perm Defl in.	0.075 (L/2175)	7'4 3/4"	0.451 (L/360)	0.170 (17%)	D	Uniform
LL Defl inch	0.150 (L/1087)	7'6 11/16"	0.451 (L/360)	0.330 (33%)	L	L
TL Defl inch	0.224 (L/725)	7'6 11/16"	0.677 (L/240)	0.330 (33%)	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.



September 13, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-4-6	(Span)1-0-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 14-0-14	(Span)0-10-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-6 to 6-5-3		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-6 to 6-5-3		Top	3 PLF	0 PLF	0 PLF	0 PLF	
5	Point	12-6-2		Far Face	754 lb	1837 lb	0 lb		
	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

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.

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

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

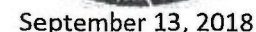
Forex
APA: PR-L318

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400

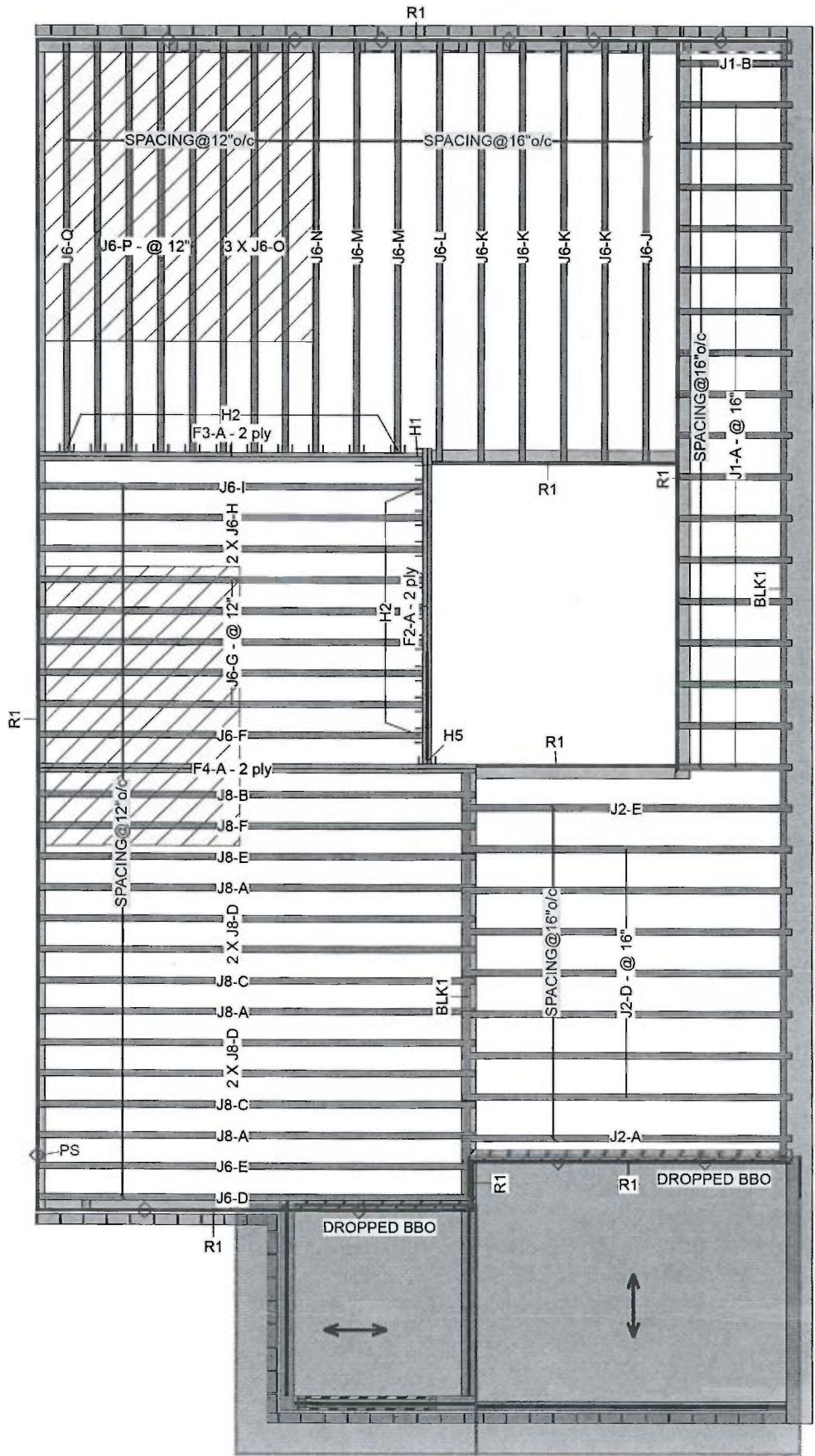


This design is valid until 7/10/2021




KOTT

oor



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.



September 13, 2018

Second Floor

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J8	NJH	2.5	9.5			12	16-0-0
J6	NJH	2.5	9.5			28	14-0-0
J2	NJH	2.5	9.5			9	12-0-0
J1	NJH	2.5	9.5			18	4-0-0

LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F4	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	16-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	14-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	12-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			11	12

Hanger

		Beam/Girder			Supported Member		
Label	Pcs	Description	Skew	Slope	fasteners	fasteners	
H1	1	HGUS410			46 16d	16 16d	
H2	20	LT259			4 10dx1 1/2	2 10dx1 1/2	
H5	1	HHUS410			30 16d	10 16d	

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	41-0-0

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 frame'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"x4" 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 are 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:

JARDIN DESIGN GROUP INC.
64 Jardin Dr, Suite 3A
Date: Rev. 1, 4/26/2018
Project No: 2645
Model: Millwood 2, Elevation 1

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)

Legend

PS	Point Load Support
◊	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

NASCOR

Layout Name

CLOVER 1-ELEV 1

Design Method

LSD

Description

Created
June 25, 2018

Builder
GREENPARK

Sales Rep
R M

Designer
R O

Shipping

Project

Builder's Project

Kott Lumber Company

14 Anderson Blvd
Stouffville, Ontario
Canada
K2H7V1
905-642-4400

Job Path

S:\CUSTOMERS\GREENPARK
MINNISALE HOMES\MODELS\BLOCK
316\CLOVER 1A\FLOORS\CLOVER 1-
ELEV 1.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/

240

Decking

Deck

SPF Plywood

Thickness

5/8"

Fastener

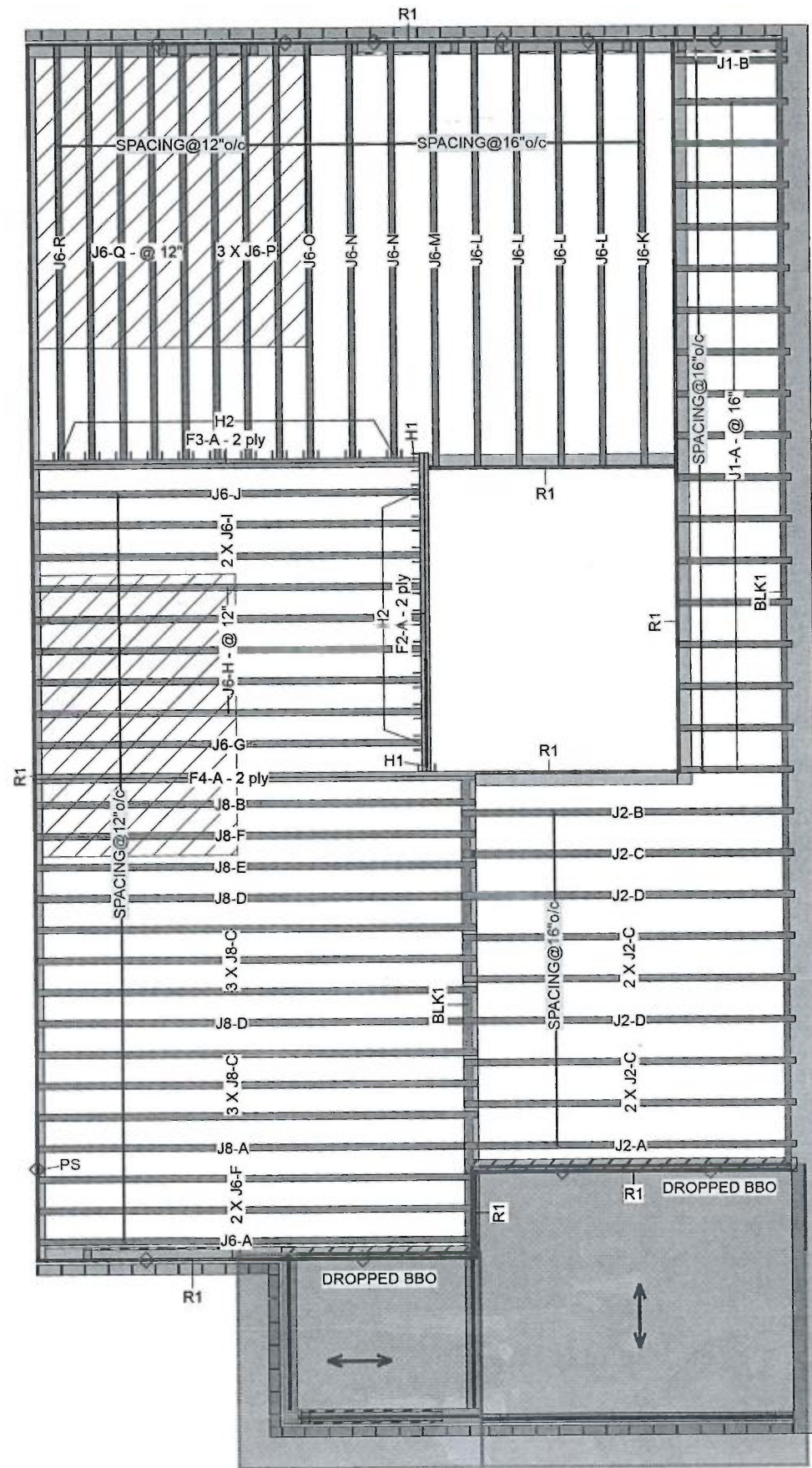
Nailed & Glued

Vibration

Ceiling: Gypsum 1/2"

KOTT

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.



September 13, 2018

Second Floor

Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J8	NJH	2.5	9.5			12	16-0-0
J6	NJH	2.5	9.5			29	14-0-0
J2	NJH	2.5	9.5			9	12-0-0
J1	NJH	2.5	9.5			18	4-0-0

LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F4	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	16-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	14-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	12-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			11	12

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	2	HGUS410			46 16d	16 16d
H2	20	LT259			4 10dx1 1/2	2 10dx1 1/2

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	NJH	2.5	9.5	LinFt		Varies	41-0-0

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 frame'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"x4" 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 are 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:

JARDIN DESIGN GROUP INC.
64 Jardin Dr, Suite 3A
Date: Rev. 1, 4/26/2018
Project No: 2645
Model: Millwood 2, Elevation 2

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)

Legend

PS	Point Load Support
◊	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

NASCOR

Layout Name

CLOVER 1-ELEV 2

Design Method

LSD

Description

Created

June 25, 2018

Builder

GREENPARK

Sales Rep

R M

Designer

R O

Shipping

Project

Builder's Project

Kott Lumber Company

14 Anderson Blvd

Stouffville, Ontario

Canada

K2H7V1

905-642-4400

Job Path

S:\CUSTOMERS\GREENPARK

MINNISALE HOMES\MODELS\BLOCK

316\CLOVER 1A\FLOORS\ELEV. 2

\CLOVER 1-ELEV 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/ 240

Decking

Deck SPF Plywood

Thickness 5/8"

Fastener Nailed & Glued

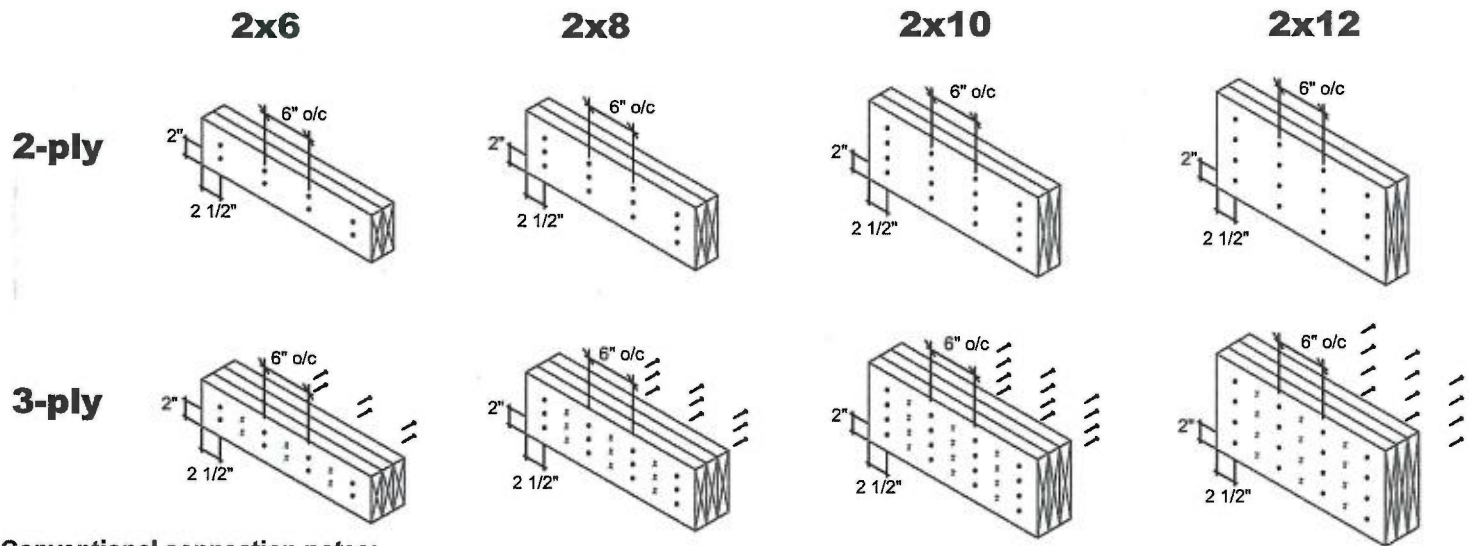
Vibration

Ceiling: Gypsum 1/2"

KOTT

MULTIPLE MEMBER CONNECTIONS

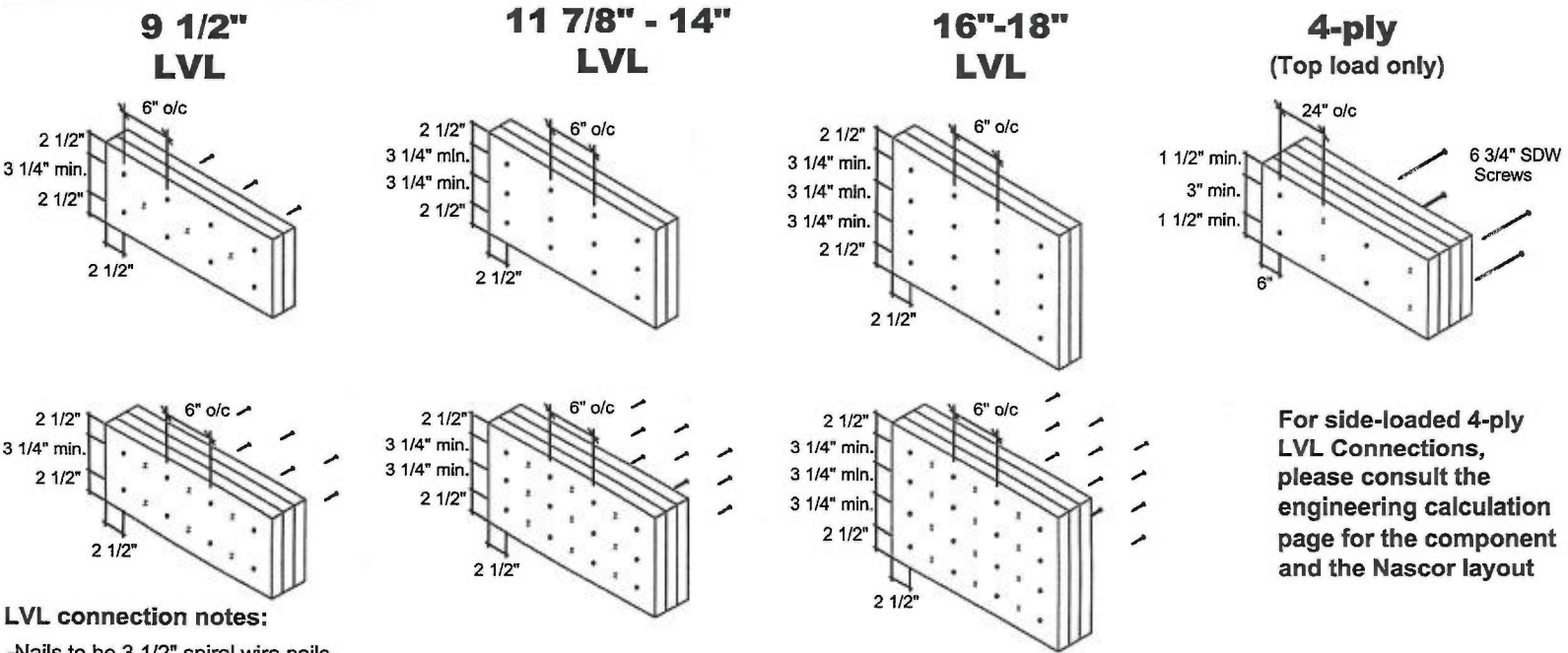
Conventional Connections (for uniform distributed loads)



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)

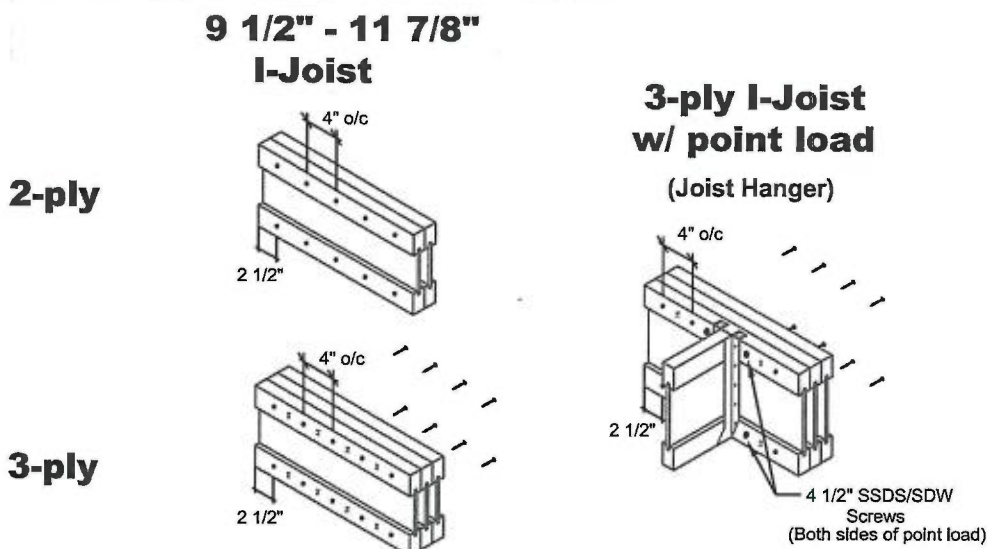


LVL connection notes:

- 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.