Engineering Note Page (ENP-2)

REVISION 2018-10-17

Please read all notes prior to installation of the component

DESIGN INFORMATION

This building component is certified as an individual component for the loads and conditions shown on the calculation and drawing page.

The responsibility of the undersigned engineer is only limited to the calculation of this building component for the loads and conditions shown on this drawing.

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

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

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

Installation of floor joists is to be carried out in accordance with the current edition of the manufacturer's literature available at http://www.kottgroup.com.

CODE

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

COMPONENT

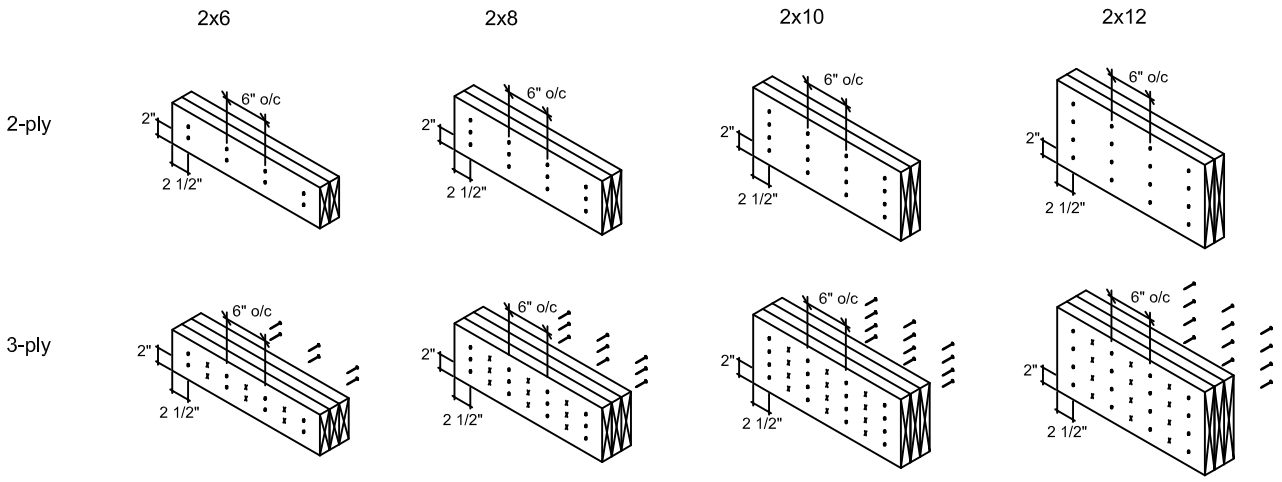
1. The building component used in construction must be the same as indicated on the drawings.
2. The building component must be installed and assembled as per specification shown on the drawing and in accordance with the manufacturer’s assembly and installation.
3. Members consisting of multiple plies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

HANDLING AND INSTALLATION

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

KOTT

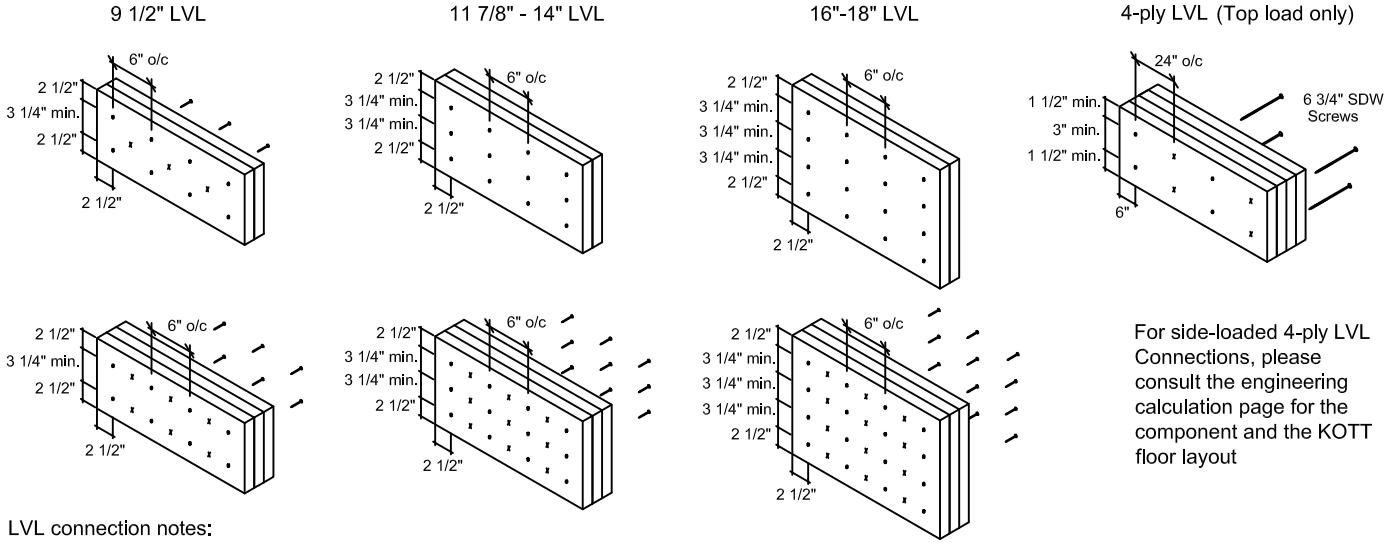
Conventional Connections



Conventional connection notes:

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

LVL Connections



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

LVL connection notes:

-LVL ply width is 1-3/4"
-Nails to be 3 1/2" common wire nails.
-Nails to be located 2 1/2" min. from the top and bottom of the member. Start all nails 2 1/2" min. 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.

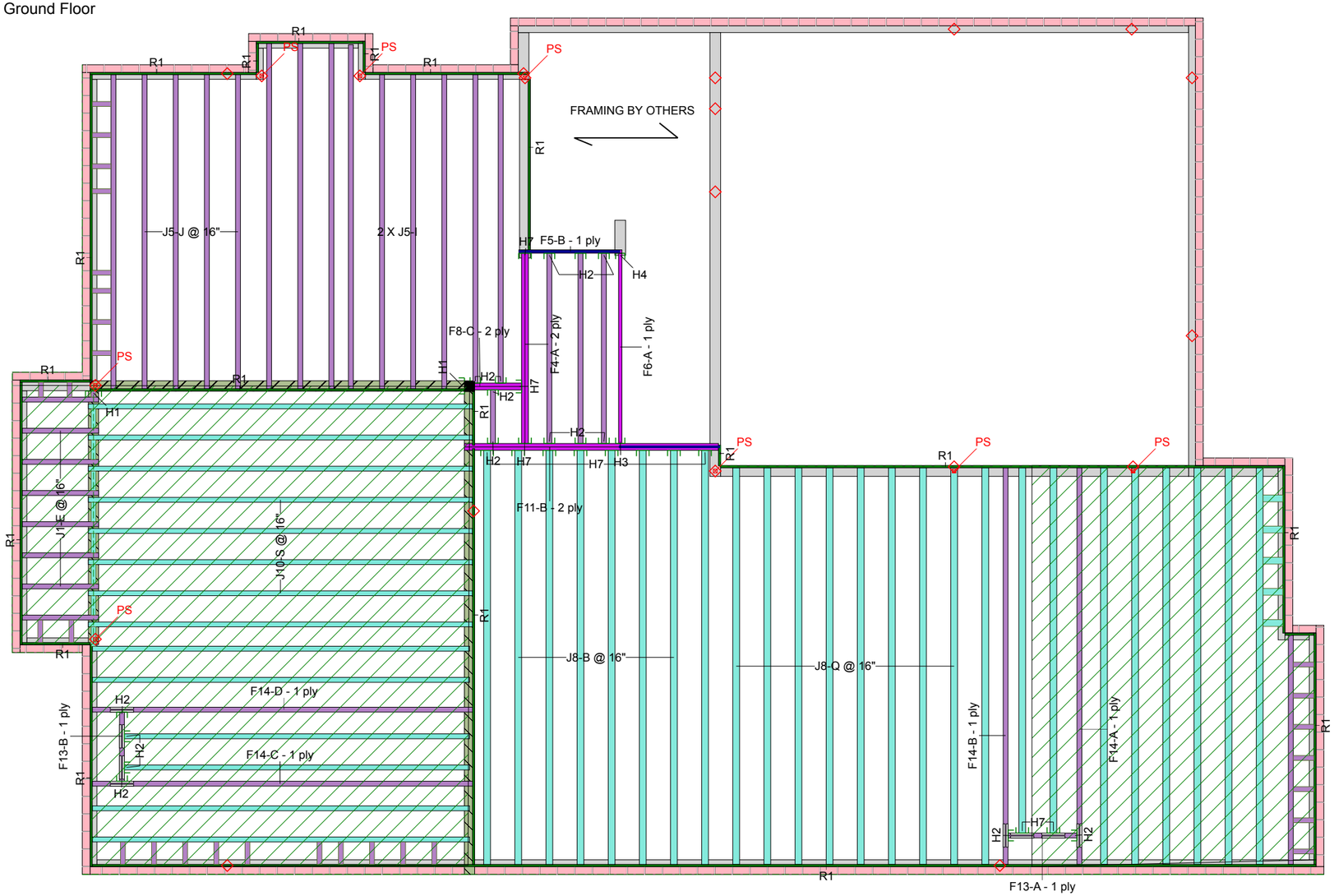
Multiple Member Connections

All connections are for uniformly distributed loads.

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

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

Ground Floor



Ground Floor
LVL/LSL

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F11	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	12-0-0
F4	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	10-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875			1	10-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	11.875			1	6-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	4-0-0

I Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F14	LPI 20Plus	2.5	11.875			4	18-0-0
F13	LPI 20Plus	2.5	11.875			2	4-0-0
J9	LPI 20Plus	2.5	11.875			4	16-0-0
J5	LPI 20Plus	2.5	11.875			10	14-0-0
J3	LPI 20Plus	2.5	11.875			4	10-0-0
J1	LPI 20Plus	2.5	11.875			9	4-0-0
J10	NJ60H	2.5	11.875			12	18-0-0
J6	NJ60H	2.5	11.875			2	16-0-0
J8	NJ60U	3.5	11.875			23	18-0-0
J7	NJ60U	3.5	11.875			2	16-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			17	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	LPI 20 Plus	2.5	11.875	LinFt		Varies	26-0-0
BLK1	NJ60H	2.5	11.875	LinFt		Varies	7-0-0
BLK3	NJ60U	3.5	11.875	LinFt		Varies	5-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	2	Unknown Hanger				
H2	16	LF2511			12 10dx1 1/2	1 #8x1 1/4WS
H3	1	HUS1.81/10			30 16d	10 16d
H4	1	LS90				
H7	13	LF3511			12 10d	2 #8x1 1/4WS

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-loadbearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist
5. Refer to Nascor specifier guide for installation details.
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"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 area represents ceramic tiled floor with an additional dead load of 5 PSF.

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

Legend

PS	Point Load Support
◇	Load from Above
	Wall
	Norbord Rimboard Plus 1.125 X 11.875
	LPI 20Plus 11.875
	NJ60H 11.875
	NJ60U 11.875
	Forex 2.0E-3000Fb LVL 1.75 X 11.875
	5.25 X 10.25 (Dropped)

NASCOR

Layout Name
LOT 2 (CELESTIAL 1 EL-2)

Design Method
LSD

Description
GREEN YORK HOMES
GRANELLI HOMES PROJECT
BRAMPTON,ON

Created
May 31, 2018

Builder

Sales Rep

Designer
S B

Shipping

Project

Builder's Project

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

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	OSB
Thickness	3/4"
Fastener	Nailed & Glued
Vibration	

Architectural Drawing Info

JARDIN DESIGN GROUP
64 JARDIN DR, SUITE 3A
VAUGHAN,ON L4K 3P3
Project # 17-55
Model: LOT-2 (CELESTIAL 1 EL-2)
Date: AUG 30, 2018

1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC -12904-R
4. CAN/CSA-O86-09
5. CCMC -12787-R APA PR-L310(C)

JOISTS SPACING 16"O/C UNLESS NOTED OTHERWISE

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 KOTT span table for the loads and spacing shown on this layout.
The floor system must be assembled in accordance to the KOTT 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.

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO

December 18, 2018

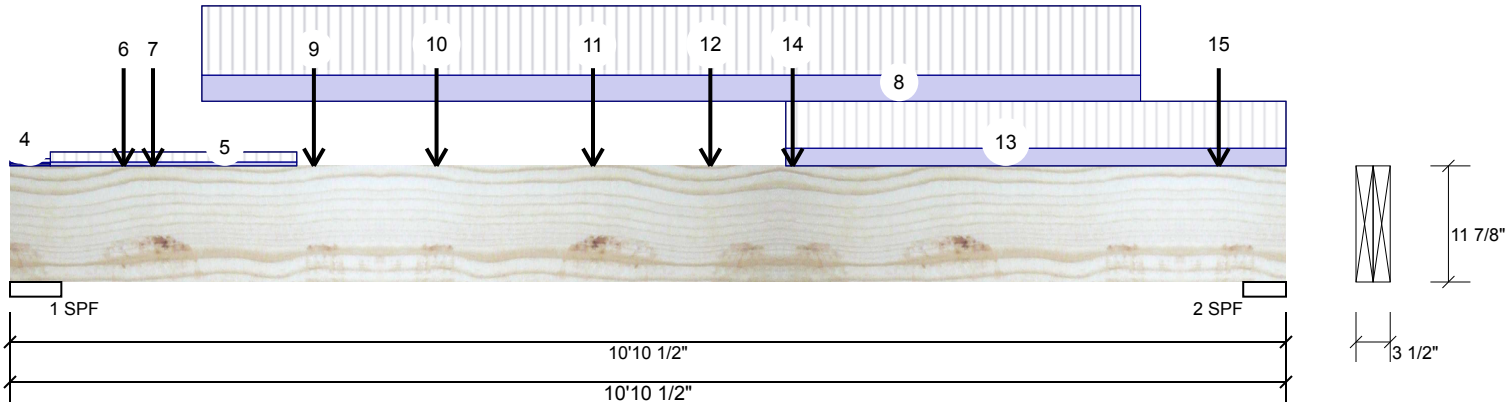
isDesign™

Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F11-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 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	2989	1416	0	0
2	3270	1359	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	55%	1770 / 4483	6253	L	1.25D+1.5L
2 - SPF	4.375"	70%	1699 / 4905	6605	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	15958 ft-lb	5'4 9/16"	34261 ft-lb	0.466 (47%)	1.25D+1.5L	L
Unbraced	15958 ft-lb	5'4 9/16"	29422 ft-lb	0.542 (54%)	1.25D+1.5L	L
Shear	6150 lb	1'4 3/8"	11596 lb	0.530 (53%)	1.25D+1.5L	L
Perm Defl in.	0.076 (L/1600)	5'4 5/8"	0.340 (L/360)	0.220 (22%)	D	Uniform
LL Defl inch	0.172 (L/710)	5'5 9/16"	0.340 (L/360)	0.510 (51%)	L	L
TL Defl inch	0.249 (L/492)	5'5 1/4"	0.510 (L/240)	0.490 (49%)	D+L	L

Design Notes

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO

December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)0-4-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-4-2	(Span)0-11-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 0-2-9		Top	1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 0-2-8		Top	2 PLF	0 PLF	0 PLF	0 PLF	
5	Tie-In	0-4-2 to 2-5-5	(Span)2-7-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	0-11-10		Near Face	135 lb	360 lb	0 lb	0 lb	J8

Continued on page 2...

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

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 until 10/18/2021

Manufacturer Info

Forex

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

NASCOR

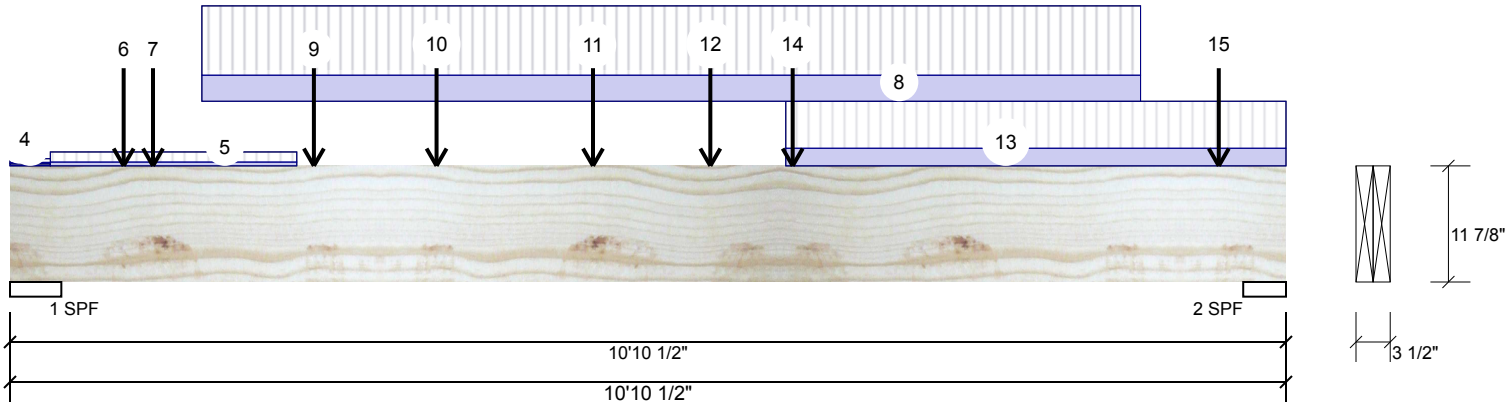
isDesign™

Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F11-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	1-2-10		Far Face	19 lb	50 lb	0 lb	0 lb	J1
8	Part. Uniform	1-7-10 to 9-7-10		Near Face	133 PLF	354 PLF	0 PLF	0 PLF	
9	Point	2-7-1		Far Face	564 lb	718 lb	0 lb	0 lb	F4
10	Point	3-7-10		Far Face	73 lb	194 lb	0 lb	0 lb	J3
11	Point	4-11-10		Far Face	71 lb	190 lb	0 lb	0 lb	J3
12	Point	5-11-10		Far Face	52 lb	139 lb	0 lb	0 lb	J3
13	Part. Uniform	6-7-5 to 10-10-8		Top	90 PLF	240 PLF	0 PLF	0 PLF	
14	Point	6-8-1		Far Face	93 lb	177 lb	0 lb	0 lb	F6
15	Point	10-3-10		Near Face	172 lb	458 lb	0 lb	0 lb	J8
	Self Weight				10 PLF				

December 18, 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

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

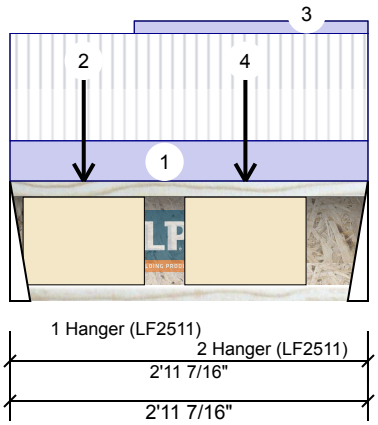
isDesign™

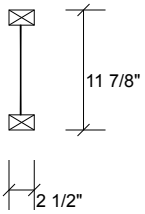
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F13-A LPI 20Plus 11.875" - 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	421	181	0	0
2	349	167	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	54%	226 / 631	858	L	1.25D+1.5L
2 - Hanger	2.000"	46%	209 / 524	733	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	637 ft-lb	1'11 5/16"	6250 ft-lb	0.102 (10%)	1.25D+1.5L	L
Shear	852 lb	1 1/4"	2345 lb	0.363 (36%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/10418)	1'11 5/16"	0.091 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.007 (L/4965)	1'11 5/16"	0.091 (L/360)	0.070 (7%)	L	L
TL Defl inch	0.010 (L/3362)	1'11 5/16"	0.137 (L/240)	0.070 (7%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.003", Long Term = 0.005"
3 Fill all hanger nailing holes.
4 See manufacture installation guide note E4 for installation details
5 Girders are designed to be supported on the bottom edge only.
6 Top flange braced at bearings.
7 Bottom flange braced at bearings.

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

December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-11-7	(Span)1-3-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-7-5		Far Face	126 lb	316 lb	0 lb	0 lb	J7
3	Part. Uniform	1-0-5 to 2-11-7		Top	3 PLF	0 PLF	0 PLF	0 PLF	
4	Point	1-11-5		Far Face	188 lb	378 lb	0 lb	0 lb	J7

Notes

This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.

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 until 10/31/2020

Manufacturer Info

Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
CCMC: 12412-R APA: PR-L238C

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

NASCOR

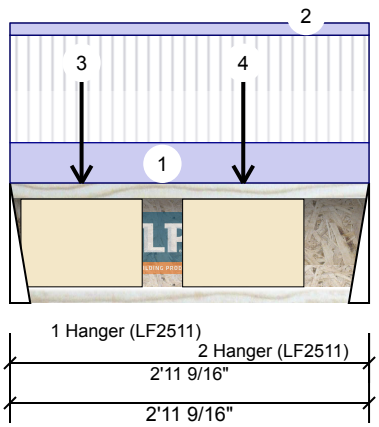
isDesign™

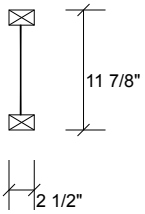
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F13-B LPI 20Plus 11.875" - 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	409	203	0	0
2	333	165	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	55%	254 / 613	867	L	1.25D+1.5L
2 - Hanger	2.000"	44%	206 / 500	706	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	629 ft-lb	1'11 1/16"	6250 ft-lb	0.101 (10%)	1.25D+1.5L	L
Shear	862 lb	1 1/4"	2345 lb	0.367 (37%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/10276)	1'11 1/8"	0.092 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.006 (L/5095)	1'11 1/8"	0.092 (L/360)	0.070 (7%)	L	L
TL Defl inch	0.010 (L/3406)	1'11 1/8"	0.138 (L/240)	0.070 (7%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.003", Long Term = 0.005"
3 Fill all hanger nailing holes.
4 See manufacture installation guide note E4 for installation details
5 Girders are designed to be supported on the bottom edge only.
6 Top flange braced at bearings.
7 Bottom flange braced at bearings.

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

December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-11-9	(Span)1-3-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-11-9		Top	3 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-7-1		Near Face	149 lb	299 lb	0 lb	0 lb	J6
4	Point	1-11-1		Near Face	181 lb	365 lb	0 lb	0 lb	J6

Notes

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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 until 10/31/2020

Manufacturer Info

Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
CCMC: 12412-R APA: PR-L238C

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

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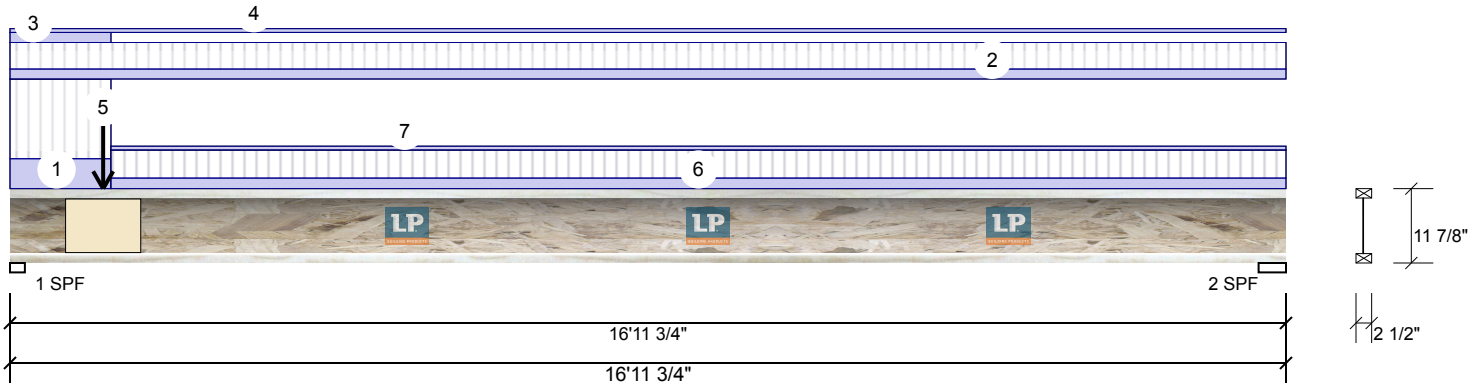
isDesign™

Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F14-A LPI 20Plus 11.875" - 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	743	369	0	0
2	397	203	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	96%	462 / 1115	1576	L	1.25D+1.5L
2 - SPF	4.375"	46%	253 / 595	848	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3625 ft-lb	7'10 1/16"	6250 ft-lb	0.580 (58%)	1.25D+1.5L	L
Shear	1552 lb	1 5/8"	2345 lb	0.662 (66%)	1.25D+1.5L	L
Perm Defl in.	0.152 (L/1305)	8'2 11/16"	0.551 (L/360)	0.280 (28%)	D	Uniform
LL Defl inch	0.299 (L/664)	8'2 1/2"	0.551 (L/360)	0.540 (54%)	L	L
TL Defl inch	0.451 (L/440)	8'2 1/2"	0.827 (L/240)	0.550 (55%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.152", Long Term = 0.228"
3 See manufacture installation guide note E4 for installation details
4 Girders are designed to be supported on the bottom edge only.
5 Top flange must be laterally braced at a maximum of 5'6" o.c.
6 Bottom flange braced at bearings.

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-4-2	(Span)3-1-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-11-12	(Span)1-0-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 1-4-2		Top	8 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 16-11-12		Top	3 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-2-14		Far Face	167 lb	349 lb	0 lb	0 lb	F13
6	Tie-In	1-4-2 to 16-11-12	(Span)1-1-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-4-2 to 16-11-12		Top	3 PLF	0 PLF	0 PLF	0 PLF	

Notes

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Manufacturer Info

Louisiana-Pacific Corp
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CCMC: 12412-R APA: PR-L238C

Kott Lumber Company
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905-642-4400

NASCOR

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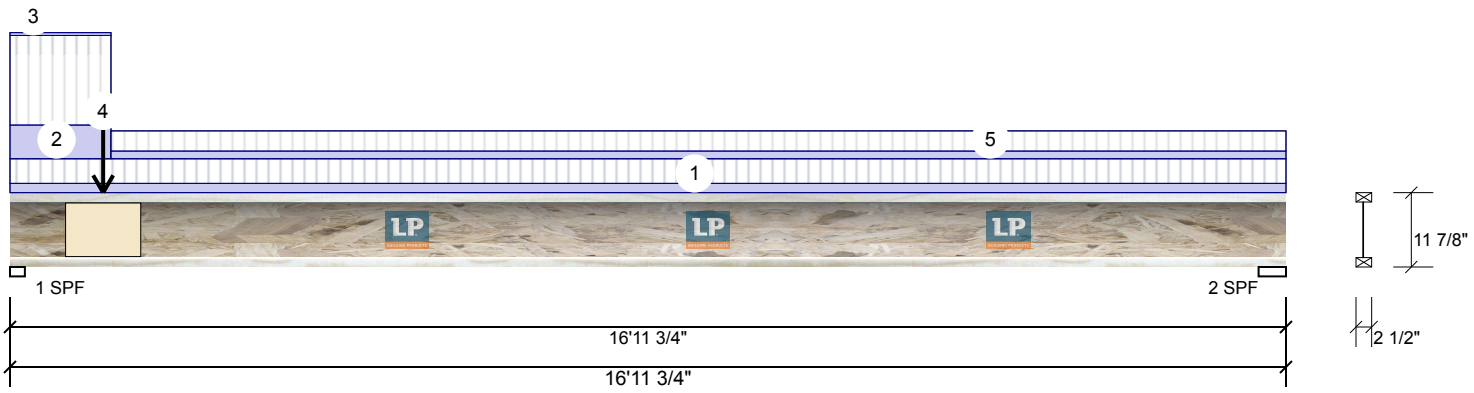
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F14-B LPI 20Plus 11.875" - 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	723	295	0	0
2	302	115	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	89%	369 / 1084	1453	L	1.25D+1.5L
2 - SPF	4.375"	33%	143 / 453	596	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2672 ft-lb	7'5"	6250 ft-lb	0.428 (43%)	1.25D+1.5L	L
Shear	1431 lb	1 5/8"	2345 lb	0.610 (61%)	1.25D+1.5L	L
Perm Defl in.	0.092 (L/2151)	8' 13/16"	0.551 (L/360)	0.170 (17%)	D	Uniform
LL Defl inch	0.239 (L/831)	8'1 3/16"	0.551 (L/360)	0.430 (43%)	L	L
TL Defl inch	0.331 (L/600)	8'1 1/8"	0.827 (L/240)	0.400 (40%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.092", Long Term = 0.138"
3 See manufacture installation guide note E4 for installation details
4 Girders are designed to be supported on the bottom edge only.
5 Top flange must be laterally braced at a maximum of 6'5" o.c.
6 Bottom flange braced at bearings.

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

LICENSED PROFESSIONAL ENGINEER
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100528832
PROVINCE OF ONTARIO
December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 16-11-12	(Span)0-10-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-4-2	(Span)3-1-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 1-4-2		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Point	1-2-14		Near Face	181 lb	421 lb	0 lb	0 lb	F13
5	Tie-In	1-4-2 to 16-11-12	(Span)0-8-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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CCMC: 12412-R APA: PR-L238C

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905-642-4400

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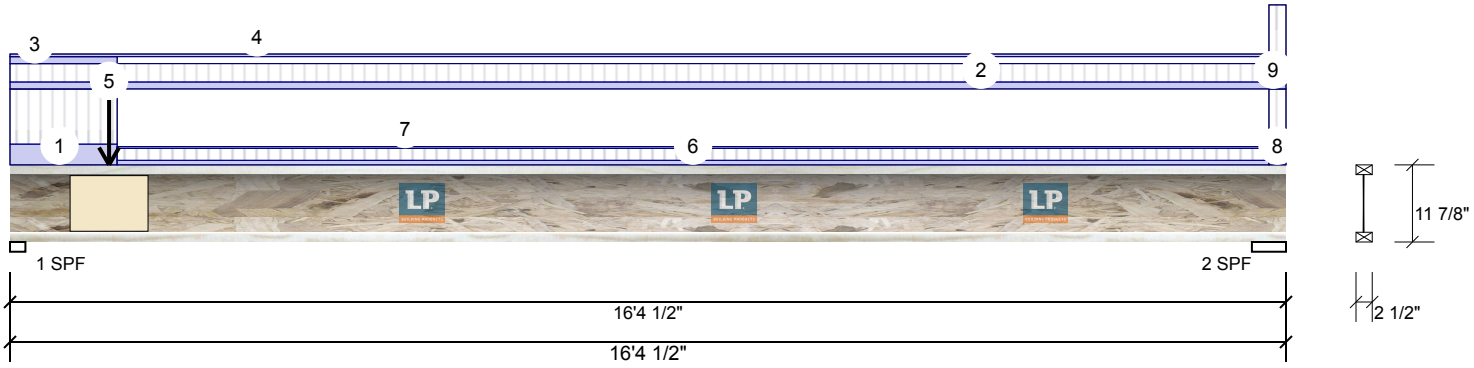
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F14-C LPI 20Plus 11.875" - 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	728	367	0	0
2	344	173	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	95%	459 / 1092	1551	L	1.25D+1.5L
2 - SPF	5.250"	40%	216 / 516	732	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2927 ft-lb	7'2 1/16"	6250 ft-lb	0.468 (47%)	1.25D+1.5L	L
Shear	1526 lb	1 5/8"	2345 lb	0.651 (65%)	1.25D+1.5L	L
Perm Defl in.	0.115 (L/1651)	7'9 7/16"	0.529 (L/360)	0.220 (22%)	D	Uniform
LL Defl inch	0.225 (L/848)	7'9 1/4"	0.529 (L/360)	0.420 (42%)	L	L
TL Defl inch	0.340 (L/560)	7'9 3/8"	0.793 (L/240)	0.430 (43%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.115", Long Term = 0.173"
3 See manufacture installation guide note E4 for installation details
4 Girders are designed to be supported on the bottom edge only.
5 Top flange must be laterally braced at a maximum of 6'2" o.c.
6 Bottom flange braced at bearings.

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-4-8	(Span)3-2-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-1-14	(Span)1-0-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 1-4-8		Top	8 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 16-1-3		Top	3 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-3-4		Far Face	203 lb	409 lb	0 lb	0 lb	F13
6	Tie-In	1-4-8 to 16-1-14	(Span)0-8-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-4-8 to 16-1-3		Top	2 PLF	0 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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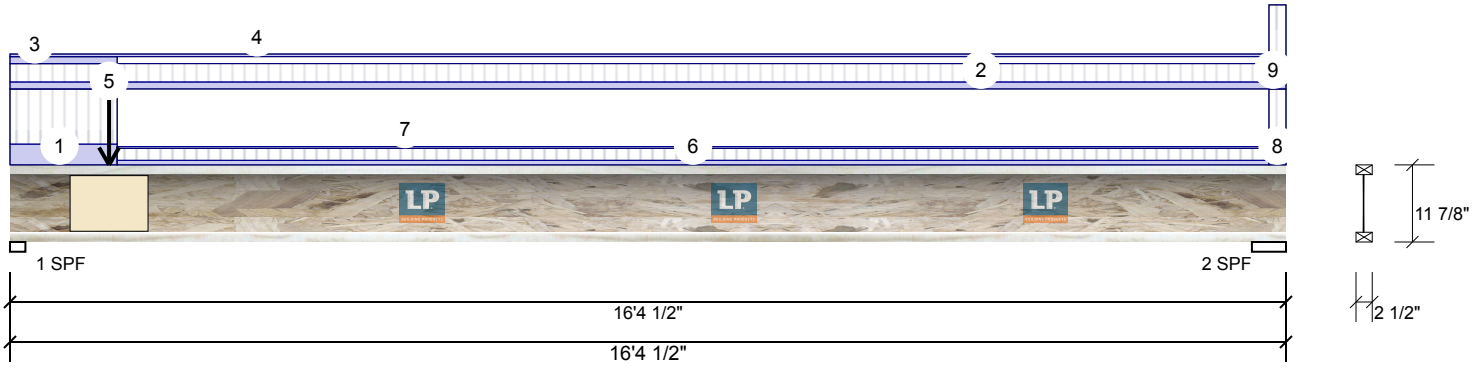
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F14-C LPI 20Plus 11.875" - PASSED

Level: Ground Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Tie-In	16-1-14 to 16-4-8	(Span)3-2-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
9	Tie-In	16-1-14 to 16-4-8	(Span)3-6-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	

December 18, 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

Notes

This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.

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NASCOR

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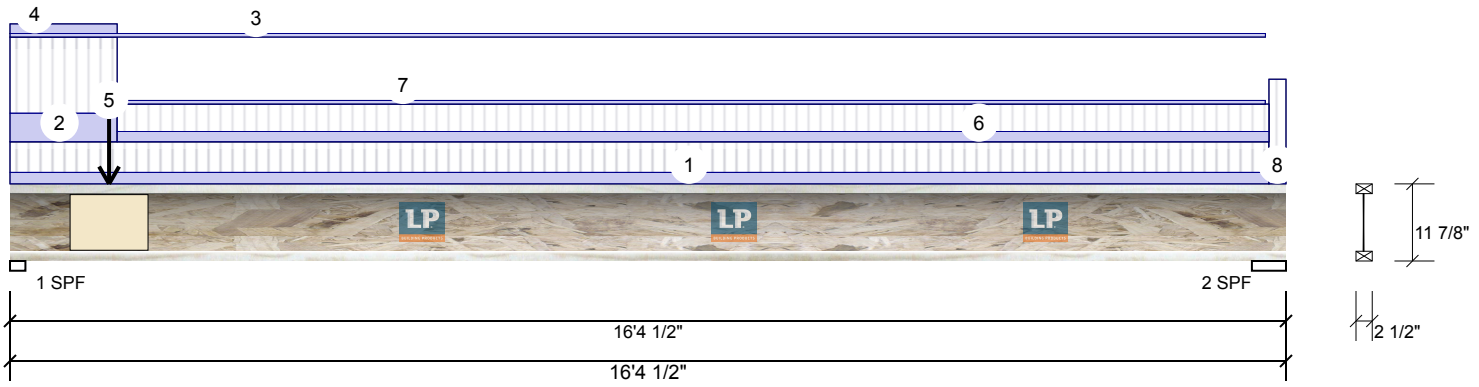
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F14-D LPI 20Plus 11.875" - 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	753	375	0	0
2	431	213	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	98%	468 / 1129	1598	L	1.25D+1.5L
2 - SPF	5.250"	50%	266 / 646	912	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3678 ft-lb	7'6 7/16"	6250 ft-lb	0.589 (59%)	1.25D+1.5L	L
Shear	1572 lb	1 5/8"	2345 lb	0.670 (67%)	1.25D+1.5L	L
Perm Defl in.	0.141 (L/1349)	7'10 5/8"	0.529 (L/360)	0.270 (27%)	D	Uniform
LL Defl inch	0.283 (L/672)	7'10 5/8"	0.529 (L/360)	0.540 (54%)	L	L
TL Defl inch	0.424 (L/449)	7'10 5/8"	0.793 (L/240)	0.530 (53%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.141", Long Term = 0.212"
3 See manufacture installation guide note E4 for installation details
4 Girders are designed to be supported on the bottom edge only.
5 Top flange must be laterally braced at a maximum of 5'5" o.c.
6 Bottom flange braced at bearings.

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO

December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 16-1-14	(Span)1-3-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-4-8	(Span)3-2-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 16-1-5		Top	3 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 1-4-8		Top	8 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-3-4		Near Face	165 lb	333 lb	0 lb	0 lb	F13
6	Tie-In	1-4-8 to 16-1-14	(Span)1-1-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-4-8 to 16-1-5		Top	3 PLF	0 PLF	0 PLF	0 PLF	
8	Tie-In	16-1-14 to 16-4-8	(Span)3-2-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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CCMC: 12412-R APA: PR-L238C

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

NASCOR

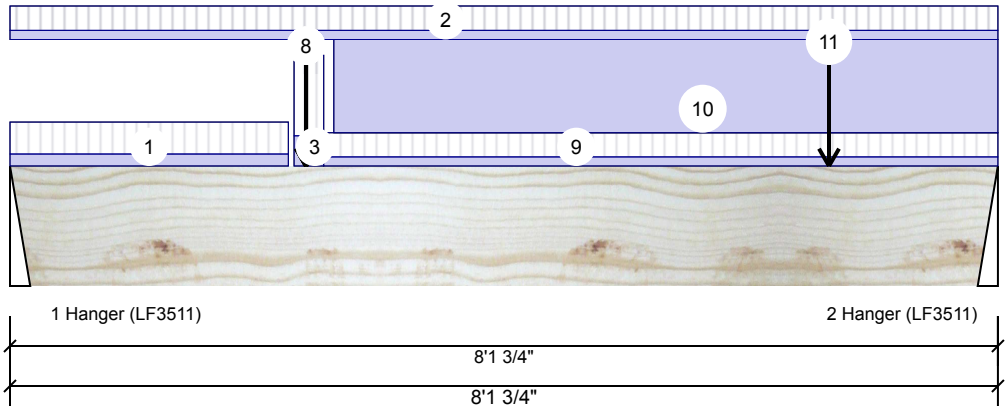
isDesign™

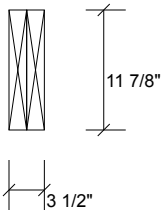
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F4-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 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	718	564	0	0
2	682	642	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	34%	705 / 1076	1781	L	1.25D+1.5L
2 - Hanger	2.000"	35%	802 / 1023	1825	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3845 ft-lb	2'6 9/16"	34261 ft-lb	0.112 (11%)	1.25D+1.5L	L
Unbraced	3845 ft-lb	2'6 9/16"	31329 ft-lb	0.123 (12%)	1.25D+1.5L	L
Shear	1664 lb	1'1 1/8"	11596 lb	0.144 (14%)	1.25D+1.5L	L
Perm Defl in.	0.019 (L/5107)	3'11 7/16"	0.265 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.021 (L/4600)	3'9 7/16"	0.265 (L/360)	0.080 (8%)	L	L
TL Defl inch	0.039 (L/2421)	3'10 3/8"	0.397 (L/240)	0.100 (10%)	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.

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

December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-3-9	(Span)1-4-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 8-1-12	(Span)1-0-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	2-4-2 to 2-7-1	(Span)3-5-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	2-5-5		Top	85 lb	226 lb	0 lb	0 lb	J5
5	Point	2-5-5		Top	19 lb	52 lb	0 lb	0 lb	J1
6	Point	2-5-5		Top	77 lb	0 lb	0 lb	0 lb	Wall Self Weight

Continued on page 2...

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

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 until 10/18/2021

Manufacturer Info

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

NASCOR

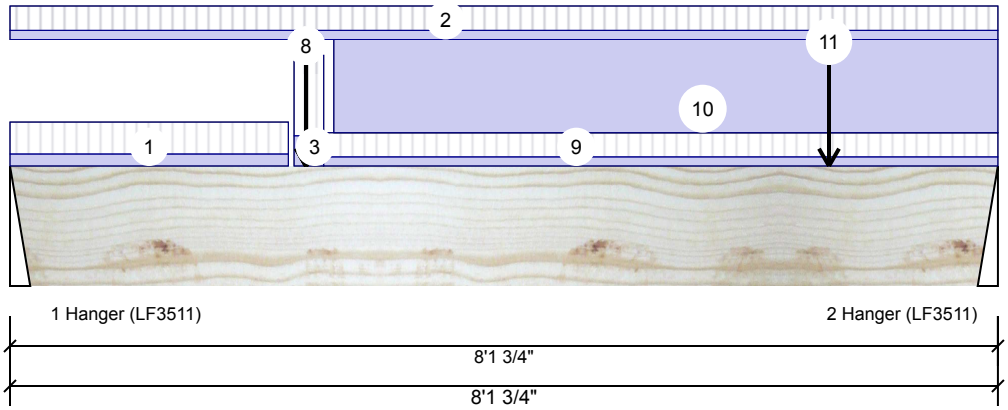
isDesign™

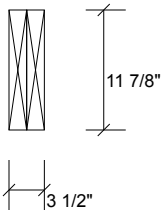
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F4-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	2-5-5		Top	30 lb	0 lb	0 lb	0 lb	Wall Self Weight
8	Point	2-5-5		Far Face	191 lb	383 lb	0 lb	0 lb	F8
9	Tie-In	2-7-1 to 8-1-12	(Span)1-0-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
10	Part. Uniform	2-8-1 to 8-1-12		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
11	Point	6-9-1		Top	151 lb	373 lb	0 lb	0 lb	F5 F5
	Self Weight				10 PLF				

December 18, 2018

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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

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

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

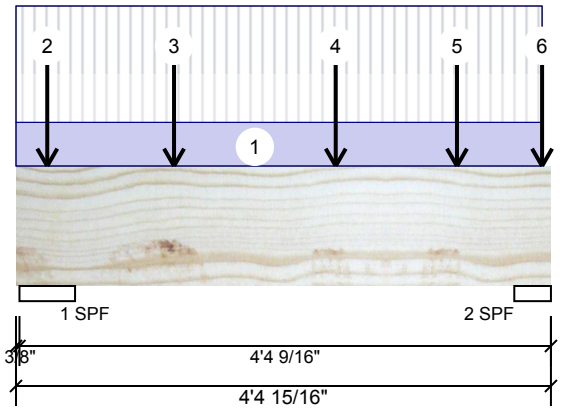
isDesign™

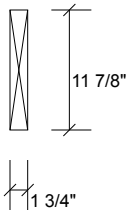
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F5-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" - 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	721	455	0	0
2	925	396	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	28%	569 / 1081	1651	LL	1.25D+1.5L
2 - SPF	3.625"	48%	495 / 1388	1882	_L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	893 ft-lb	2'7 5/8"	17130 ft-lb	0.052 (5%)	1.25D+1.5L	_L
Unbraced	893 ft-lb	2'7 5/8"	11433 ft-lb	0.078 (8%)	1.25D+1.5L	_L
Shear	723 lb	3'2 3/16"	5798 lb	0.125 (12%)	1.25D+1.5L	_L
Perm Defl in.	0.002 (L/23960)	2'4"	0.130 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/9470)	2'4 1/16"	0.130 (L/360)	0.040 (4%)	L	_L
TL Defl inch	0.007 (L/6787)	2'4 1/16"	0.196 (L/240)	0.040 (4%)	D+L	_L
LL Cant	-0.000 (2L/11767)	Lt Cant	0.200 (2L/480)	0.000 (0%)	L	_L
TL Cant	-0.000 (2L/8440)	Lt Cant	0.300 (2L/360)	0.000 (0%)	D+L	_L

Design Notes

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO

December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 4-4-1		Top	30 PLF	80 PLF	0 PLF	0 PLF	
2	Point	0-3-2		Near Face	290 lb	308 lb	0 lb	0 lb	F4
3	Point	1-3-10		Near Face	73 lb	194 lb	0 lb	0 lb	J3
4	Point	2-7-10		Near Face	71 lb	190 lb	0 lb	0 lb	J3
5	Point	3-7-10		Near Face	52 lb	139 lb	0 lb	0 lb	J3

Continued on page 2...

Notes

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Lumber

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

Handling & Installation

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

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This design is valid until 10/18/2021

Manufacturer Info

Forex

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

NASCOR

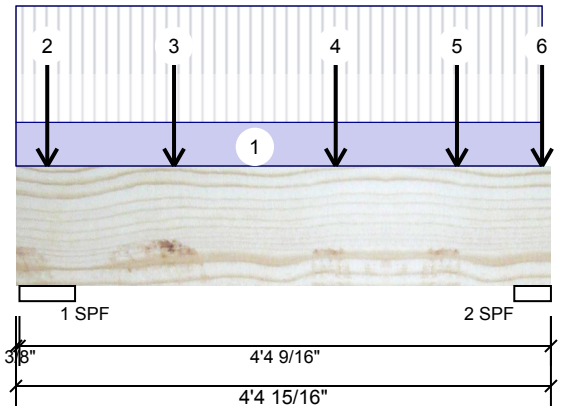
isDesign™

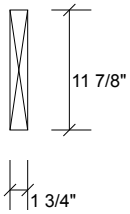
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F5-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	4-4-1		Near Face	214 lb	468 lb	0 lb	0 lb	F6
	Self Weight				5 PLF				

December 18, 2018

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

Notes

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Lumber

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2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

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

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

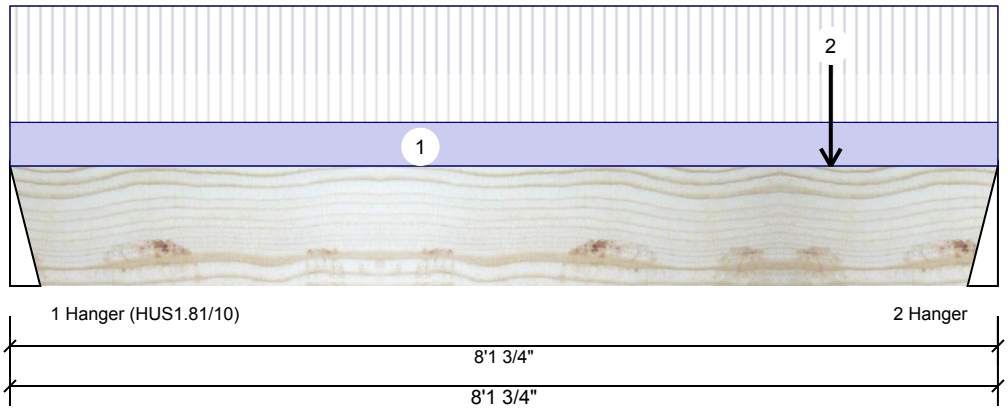
isDesign™

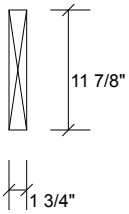
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - 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	177	93	0	0
2	718	329	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	10%	116 / 265	381	L	1.25D+1.5L
2 - Hanger	3.000"	38%	411 / 1077	1487	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1740 ft-lb	6'9 3/16"	17130 ft-lb	0.102 (10%)	1.25D+1.5L	L
Unbraced	1740 ft-lb	6'9 3/16"	5785 ft-lb	0.301 (30%)	1.25D+1.5L	L
Shear	1448 lb	6'11 5/8"	5798 lb	0.250 (25%)	1.25D+1.5L	L
Perm Defl in.	0.009 (L/10723)	4'8 5/8"	0.259 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.018 (L/5141)	4'9 9/16"	0.259 (L/360)	0.070 (7%)	L	L
TL Defl inch	0.027 (L/3475)	4'9 5/16"	0.389 (L/240)	0.070 (7%)	D+L	L

Design Notes

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

December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	V	
1	Tie-In	0-0-0 to 8-1-12	(Span)0-8-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	6-9-4		Top	340 lb	780 lb	0 lb	0 lb	C5
	Self Weight				5 PLF				

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

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Notes

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Lumber

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

Handling & Installation

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

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

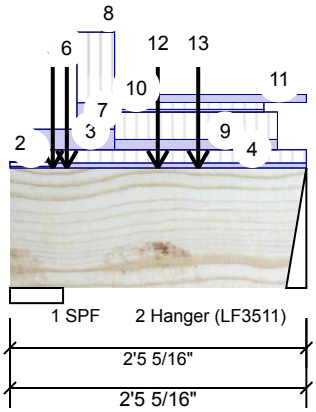
isDesign™

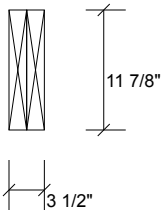
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F8-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" 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	2902	1305	0	0
2	383	191	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	54%	1631 / 4353	5984	L	1.25D+1.5L
2 - Hanger	2.000"	16%	238 / 575	813	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	528 ft-lb	1'6 5/8"	34261 ft-lb	0.015 (2%)	1.25D+1.5L	L
Unbraced	528 ft-lb	1'6 5/8"	34261 ft-lb	0.015 (2%)	1.25D+1.5L	L
Shear	853 lb	1'4 3/8"	11596 lb	0.074 (7%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/58768)	1'5 13/16"	0.066 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.001 (L/27132)	1'6 5/8"	0.066 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.001 (L/18576)	1'6 3/8"	0.098 (L/240)	0.010 (1%)	D+L	L

Design Notes

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

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December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)0-10-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-2-10		Top	2 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 0-10-6		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight

Continued on page 2...

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

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Notes

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Lumber

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Handling & Installation

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

This design is valid until 10/18/2021

Manufacturer Info

Species: APA: PR-L318

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

NASCOR

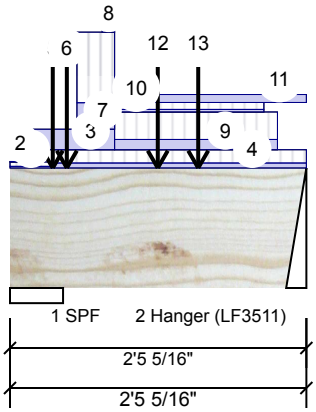
isDesign™

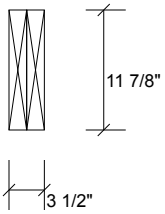
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F8-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Tie-In	0-4-2 to 2-5-5	(Span)2-7-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	0-4-4		Top	965 lb	2248 lb	0 lb	0 lb	F12 F12
6	Point	0-5-10		Far Face	119 lb	318 lb	0 lb	0 lb	J5
7	Part. Uniform	0-6-10 to 0-10-6		Top	103 PLF	275 PLF	0 PLF	0 PLF	J5
8	Part. Uniform	0-9-2 to 0-10-6		Top	26 PLF	68 PLF	0 PLF	0 PLF	J1
9	Part. Uniform	0-10-6 to 2-2-7		Top	40 PLF	107 PLF	0 PLF	0 PLF	J5
10	Part. Uniform	0-10-6 to 2-1-2		Top	10 PLF	27 PLF	0 PLF	0 PLF	J1
11	Part. Uniform	0-10-6 to 2-5-5		Top	31 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
12	Point	1-2-10		Near Face	19 lb	50 lb	0 lb	0 lb	J1
13	Point	1-6-10		Far Face	107 lb	285 lb	0 lb	0 lb	J5
	Self Weight				10 PLF				

December 18, 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

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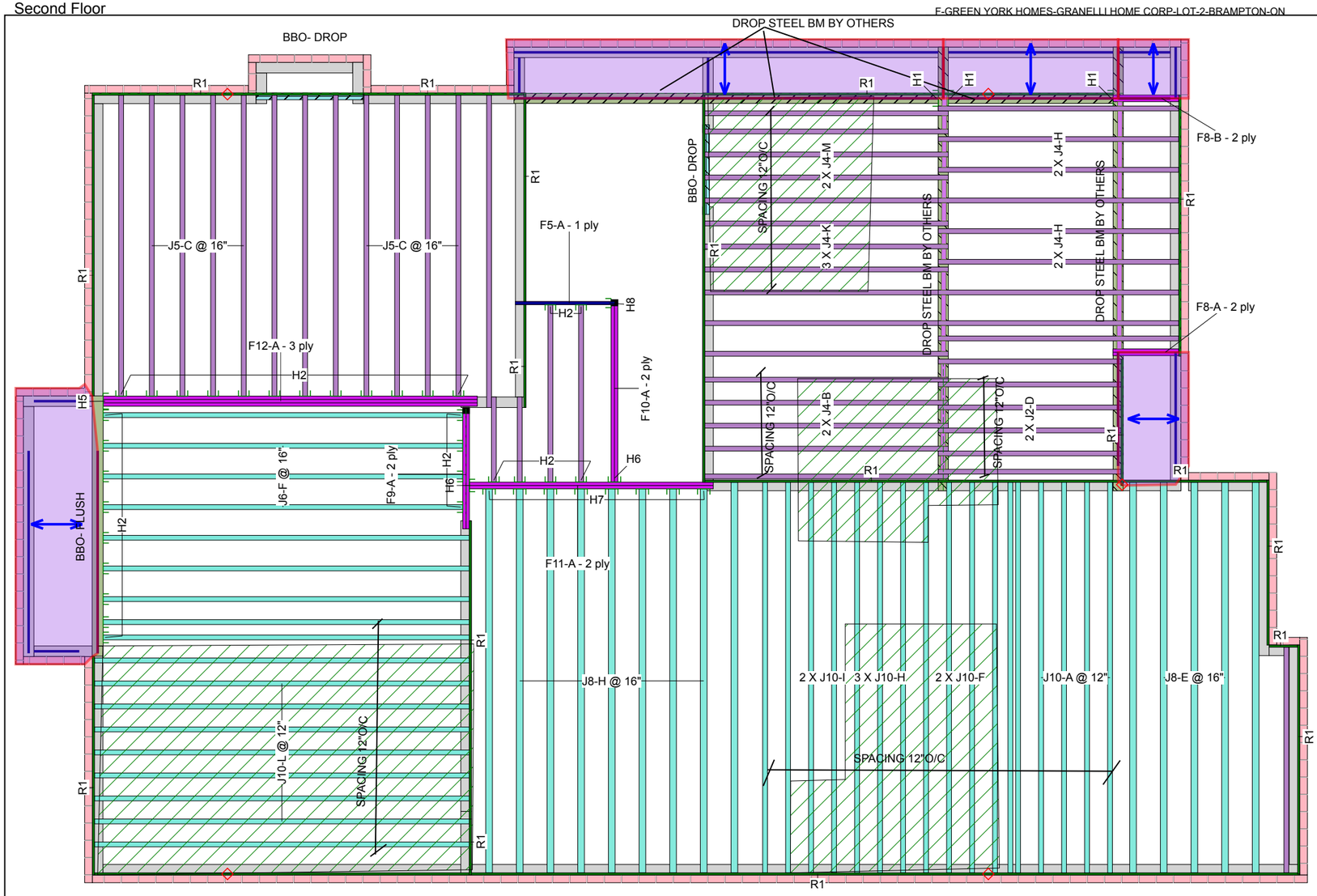


Second Floor
LVL/LSL

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F12	Forex 2.0E-3000Fb LVL	1.75	11.875	1	3	3	18-0-0
F11	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	12-0-0
F10	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	8-0-0
F9	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	6-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	11.875			1	6-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	11.875	2	2	4	4-0-0

I Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J5	LPI 20Plus	2.5	11.875			13	14-0-0
J4	LPI 20Plus	2.5	11.875			25	12-0-0
J3	LPI 20Plus	2.5	11.875			1	10-0-0
J2	LPI 20Plus	2.5	11.875			8	8-0-0
J1	LPI 20Plus	2.5	11.875			2	4-0-0
J10	NJ60H	2.5	11.875			26	18-0-0
J6	NJ60H	2.5	11.875			9	16-0-0
J8	NJ60U	3.5	11.875			14	18-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			19	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK2	NJH	2.5	11.875	LinFt		Varies	20-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	3	Unknown Hanger				
H2	31	LF2511			12 10d	1 #8x1 1/4WS
H5	1	HUC610 (Max)			18 16d	8 16d
H6	2	HGUS410			46 16d	16 16d
H7	8	LF3511			12 10d	2 #8x1 1/4WS
H8	1	HUCQ1.81/10-SDS				

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-loadbearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist
5. Refer to Nascor specifier guide for installation details.
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"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 area represents ceramic tiled floor with an additional dead load of 5 PSF.

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

NASCOR

Layout Name
LOT 2 (CELESTIAL 1 EL-2)

Design Method
LSD

Description
GREEN YORK HOMES
GRANELLI HOMES PROJECT
BRAMPTON,ON

Created
May 31, 2018

Builder

Sales Rep

Designer
S B

Shipping

Project

Builder's Project

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

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	OSB
Thickness	5/8"
Fastener	Nailed & Glued
Vibration	
Ceiling:	Gypsum 1/2"

Roof

Loads	
Live	0
Dead	17
Snow	36
Deflection Joist	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Deflection Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	360
TL Cant 2L/	360
Decking	
Deck	SPF Plywood
Thickness	5/8"
Fastener	Nailed Only

Architectural Drawing Info

JARDIN DESIGN GROUP
64 JARDIN DR, SUITE 3A
VAUGHAN,ON L4K 3P3
Project # 17-55
Model: LOT-2(CELESTIAL 1 EL-2)
Date: AUG 30, 2018

1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC -12904-R
4. CAN/CSA-O86-09
5. CCMC -12787-R APA PR-L310(C)

JOISTS SPACING 16"O/C
UNLESS
NOTED OTHERWISE

Legend

PS	Point Load Support
◇	Load from Above
	Wall
	Norbord Rimboard Plus 1.125 X 11.875
	LPI 20Plus 11.875
	NJ60H 11.875
	NJ60U 11.875
	Forex 2.0E-3000Fb LVL 1.75 X 11.875
	1.75 X 9.5 (Dropped)
	5.25 X 10.25 (Dropped)
	5.75 X 10.25

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 KOTT span table for the loads and spacing shown on this layout.
The floor system must be assembled in accordance to the KOTT 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.

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO

December 18, 2018

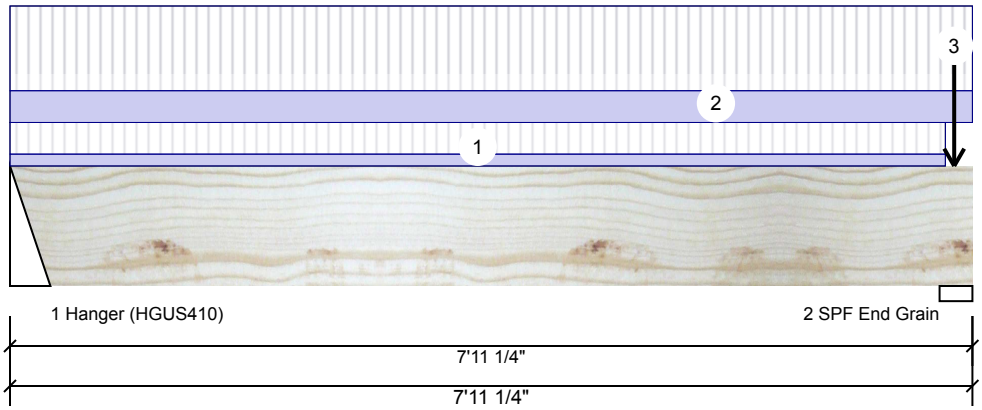
isDesign™

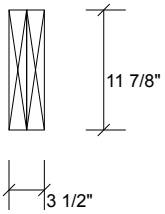
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F10-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 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	427	198	0	0
2	780	340	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	4.000"	9%	248 / 641	888	L	1.25D+1.5L
2 - SPF End Grain	3.250"	19%	425 / 1170	1594	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1544 ft-lb	4'	34261 ft-lb	0.045 (5%)	1.25D+1.5L	L
Unbraced	1544 ft-lb	4'	31673 ft-lb	0.049 (5%)	1.25D+1.5L	L
Shear	608 lb	6'8 7/8"	11596 lb	0.052 (5%)	1.25D+1.5L	L
Perm Defl in.	0.004 (L/19948)	4'	0.249 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.010 (L/9260)	4'	0.249 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.014 (L/6324)	4'	0.373 (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 braced at bearings.
6 Bottom braced at bearings.
7 Lateral slenderness ratio based on full section width.

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO

December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 7-8-9	(Span)1-5-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 7-11-4	(Span) 3-10-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	7-9-7		Far Face	147 lb	366 lb	0 lb	0 lb	F5
	Self Weight				10 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.

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

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

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA PRP-108

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

NASCOR

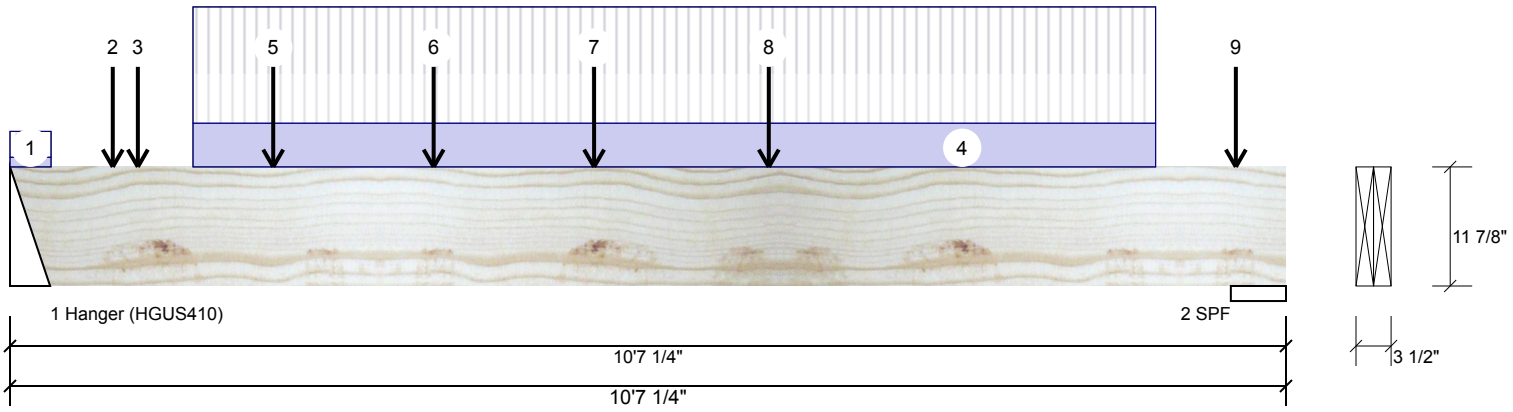
isDesign™

Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F11-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 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	2169	879	0	0
2	2155	884	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	4.000"	42%	1098 / 3253	4351	L	1.25D+1.5L
2 - SPF	5.500"	37%	1105 / 3233	4338	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11611 ft-lb	5'2 7/16"	34261 ft-lb	0.339 (34%)	1.25D+1.5L	L
Unbraced	11611 ft-lb	5'2 7/16"	29666 ft-lb	0.391 (39%)	1.25D+1.5L	L
Shear	4484 lb	1'3 1/8"	11596 lb	0.387 (39%)	1.25D+1.5L	L
Perm Defl in.	0.049 (L/2444)	5'2 15/16"	0.331 (L/360)	0.150 (15%)	D	Uniform
LL Defl inch	0.119 (L/999)	5'2 11/16"	0.331 (L/360)	0.360 (36%)	L	L
TL Defl inch	0.168 (L/709)	5'2 13/16"	0.497 (L/240)	0.340 (34%)	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.

December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)3-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-10-4		Near Face	135 lb	360 lb	0 lb	0 lb	J8
3	Point	1-0-12		Far Face	30 lb	80 lb	0 lb	0 lb	J1
4	Part. Uniform	1-6-4 to 9-6-4		Near Face	124 PLF	330 PLF	0 PLF	0 PLF	
5	Point	2-2-4		Far Face	31 lb	84 lb	0 lb	0 lb	J1
6	Point	3-6-4		Far Face	75 lb	200 lb	0 lb	0 lb	J2

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

Continued on page 2...

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

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 until 10/18/2021

Manufacturer Info

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

NASCOR

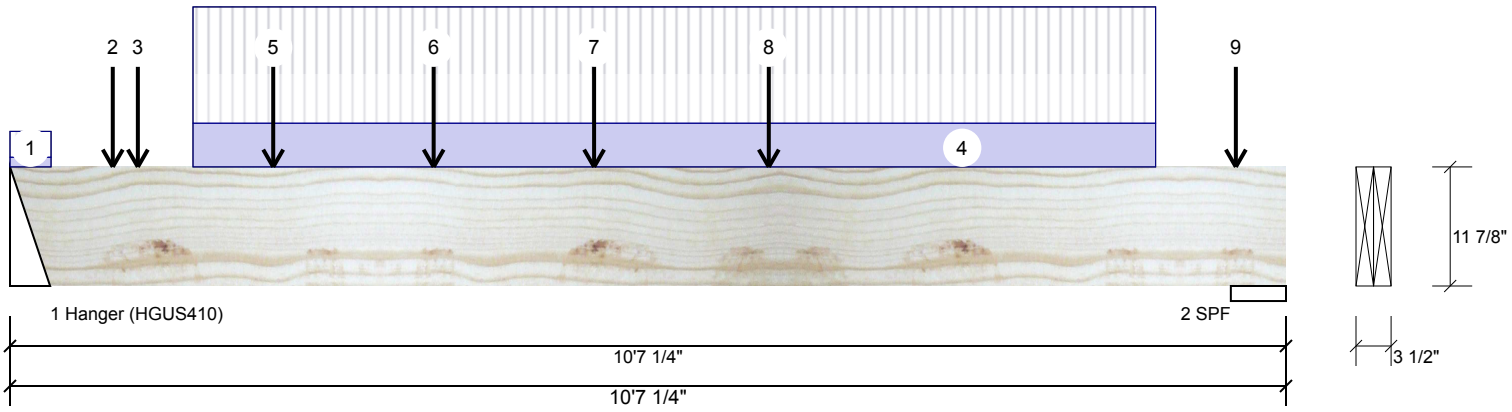
isDesign™

Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F11-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	4-10-4		Far Face	81 lb	215 lb	0 lb	0 lb	J2
8	Point	6-3-11		Far Face	198 lb	427 lb	0 lb	0 lb	F10
9	Point	10-2-4		Near Face	110 lb	293 lb	0 lb	0 lb	J8
	Self Weight				10 PLF				

December 18, 2018

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.

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

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

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

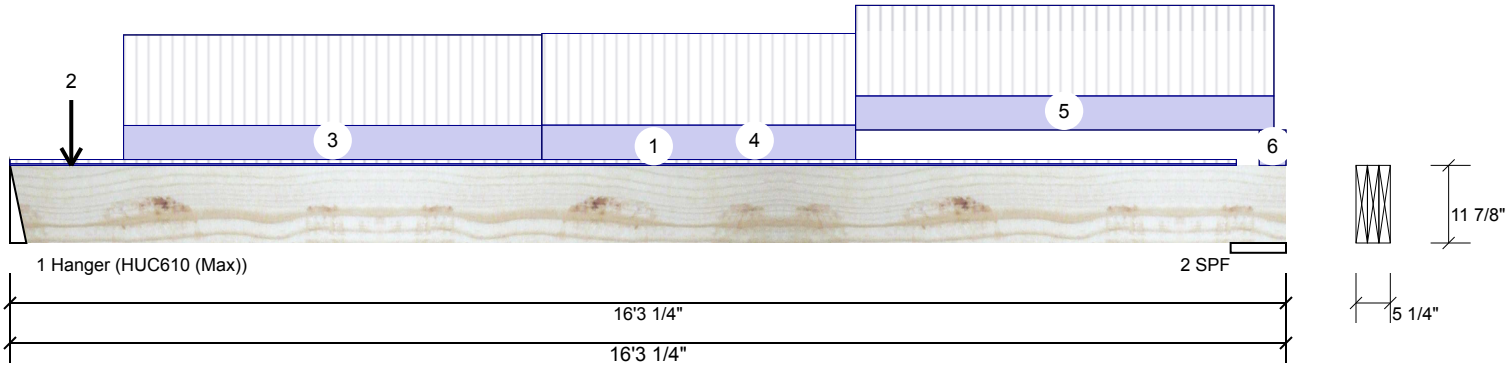
isDesign™

Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F12-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	3	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	Yes
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	2091	898	0	0
2	2248	965	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.500"	44%	1123 / 3136	4259	L	1.25D+1.5L
2 - SPF	8.469"	17%	1206 / 3373	4578	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	16539 ft-lb	7'10 3/4"	53447 ft-lb	0.309 (31%)	1.25D+1.5L	L
Unbraced	16539 ft-lb	7'10 3/4"	49731 ft-lb	0.333 (33%)	1.25D+1.5L	L
Shear	4714 lb	1'1 5/8"	17394 lb	0.271 (27%)	1.25D+1.5L	L
Perm Defl in.	0.109 (L/1707)	7'10 11/16"	0.516 (L/360)	0.210 (21%)	D	Uniform
LL Defl inch	0.254 (L/731)	7'10 11/16"	0.516 (L/360)	0.490 (49%)	L	L
TL Defl inch	0.363 (L/512)	7'10 11/16"	0.774 (L/240)	0.470 (47%)	D+L	L

Design Notes

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

READ ALL NOTES ON THIS PAGE AND ON 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.

December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-7-10	(Span)0-7-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-9-6		Far Face	123 lb	328 lb	0 lb	0 lb	J5
3	Part. Uniform	1-5-6 to 6-9-6		Far Face	97 PLF	258 PLF	0 PLF	0 PLF	
4	Part. Uniform	6-9-6 to 10-9-6		Far Face	98 PLF	261 PLF	0 PLF	0 PLF	
5	Part. Uniform	10-9-6 to 16-1-6		Far Face	97 PLF	258 PLF	0 PLF	0 PLF	
6	Tie-In	15-11-2 to 16-3-4	(Span)3-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				14 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 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

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

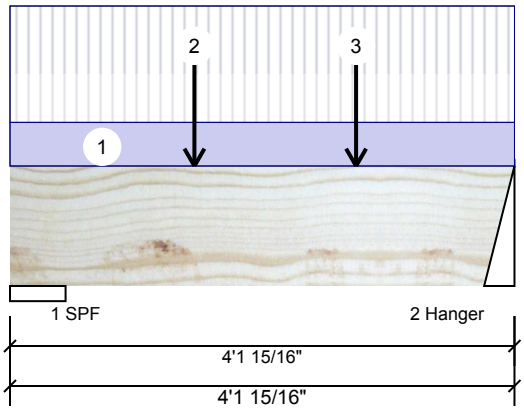
isDesign™

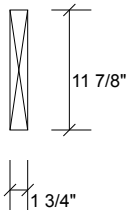
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F5-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second 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	373	151	0	0
2	366	147	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	13%	188 / 559	748	L	1.25D+1.5L
2 - Hanger	3.000"	19%	184 / 549	733	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	711 ft-lb	2'3 1/4"	17130 ft-lb	0.041 (4%)	1.25D+1.5L	L
Unbraced	711 ft-lb	2'3 1/4"	12369 ft-lb	0.057 (6%)	1.25D+1.5L	L
Shear	540 lb	2'11 13/16"	5798 lb	0.093 (9%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/29239)	2'2 1/2"	0.119 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.004 (L/11617)	2'2 9/16"	0.119 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.005 (L/8314)	2'2 9/16"	0.179 (L/240)	0.030 (3%)	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.

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO

December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 4-1-15		Top	30 PLF	80 PLF	0 PLF	0 PLF	
2	Point	1-6-4		Near Face	72 lb	191 lb	0 lb	0 lb	J2
3	Point	2-10-4		Near Face	81 lb	215 lb	0 lb	0 lb	J2
	Self Weight				5 PLF				

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Notes

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Lumber

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Handling & Installation

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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

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

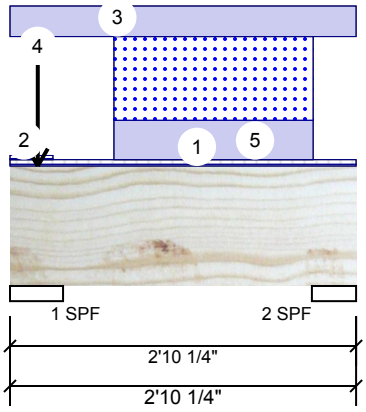
isDesign™

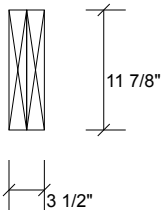
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 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	20	514	745	0
2	17	232	215	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	16%	642 / 1128	1770	L	1.25D+1.5S +0.5L
2 - SPF	4.375"	7%	290 / 331	622	L	1.25D+1.5S +0.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	318 ft-lb	1'6 1/16"	34261 ft-lb	0.009 (1%)	1.25D+1.5S +0.5L	L
Unbraced	318 ft-lb	1'6 1/16"	34261 ft-lb	0.009 (1%)	1.25D+1.5S +0.5L	L
Shear	82 lb	1'4 3/8"	11596 lb	0.007 (1%)	1.25D+1.5S +0.5L	L
Perm Defl in.	0.000 (L/64863)	1'5 13/16"	0.073 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.000 (L/59654)	1'6 1/16"	0.073 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.001 (L/31078)	1'6"	0.109 (L/240)	0.010 (1%)	D+S+0.5L	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.

December 18, 2018

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Lumber

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Handling & Installation

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Manufacturer Info

Forex
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L4A 7X4
905-642-4400

NASCOR

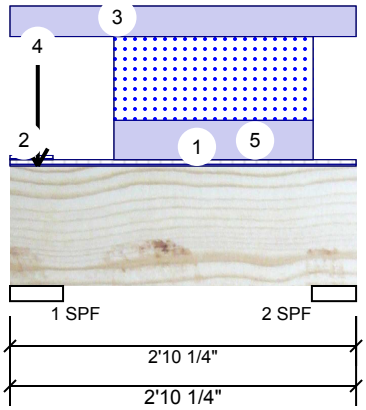
isDesign™

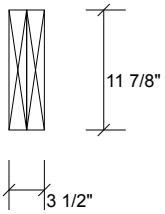
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-10-4	(Span)0-7-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-4-4	(Span)0-4-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 2-10-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Point	0-2-12		Top	307 lb	0 lb	601 lb	0 lb	F2 F2
5	Part. Uniform	0-10-5 to 2-6-0		Top	103 PLF	0 PLF	219 PLF	0 PLF	
	Self Weight				10 PLF				

December 18, 2018

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Manufacturer Info

Forex
APA: PR-L318

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

NASCOR

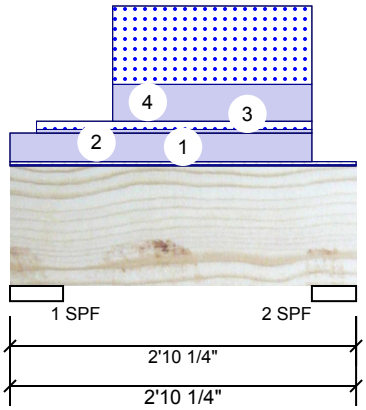
isDesign™

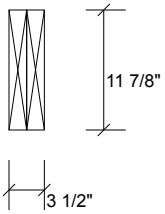
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F8-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 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	13	217	175	0
2	12	211	237	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	5%	271 / 268	540	L	1.25D+1.5S +0.5L
2 - SPF	4.375"	7%	263 / 356	619	L	1.25D+1.5S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	342 ft-lb	1'6"	33918 ft-lb	0.010 (1%)	1.25D+1.5S	L
Unbraced	342 ft-lb	1'6"	33918 ft-lb	0.010 (1%)	1.25D+1.5S	L
Shear	84 lb	1'4 3/8"	11480 lb	0.007 (1%)	1.25D+1.5S	L
Perm Defl in.	0.000 (L/61871)	1'5 13/16"	0.073 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.000 (L/53786)	1'6 1/16"	0.073 (L/360)	0.010 (1%)	S+0.5L	L
TL Defl inch	0.001 (L/28775)	1'5 15/16"	0.109 (L/240)	0.010 (1%)	D+S+0.5L	L

Design Notes

1 Girders are designed to be supported on the bottom edge only.
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4 Top braced at bearings.
5 Bottom braced at bearings.
6 Lateral slenderness ratio based on full section width.

December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-10-4	(Span)0-5-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-5-14		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-2-10 to 2-5-14		Top	10 PLF	0 PLF	23 PLF	0 PLF	
4	Part. Uniform	0-10-3 to 2-5-14		Top	103 PLF	0 PLF	219 PLF	0 PLF	
	Self Weight				10 PLF				

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Lumber

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Forex

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

NASCOR

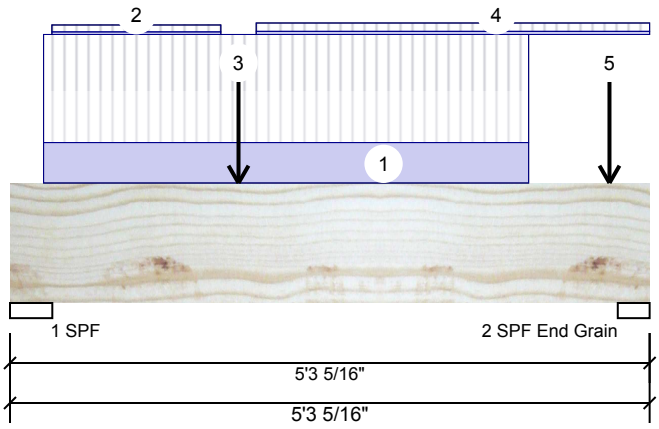
isDesign™

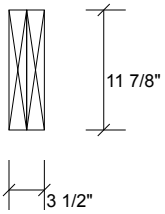
Client:
Project:
Address:

Date: 12/17/2018
Designer: S B
Job Name: LOT 2 (CELESTIAL 1 EL-2)
Project #:

F9-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 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	2232	905	0	0
2	1599	646	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.188"	50%	1132 / 3348	4479	L	1.25D+1.5L
2 - SPF End Grain	3.153"	39%	807 / 2398	3205	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6295 ft-lb	1'10 5/8"	34261 ft-lb	0.184 (18%)	1.25D+1.5L	L
Unbraced	6295 ft-lb	1'10 5/8"	33194 ft-lb	0.190 (19%)	1.25D+1.5L	L
Shear	3930 lb	1'3 5/16"	11596 lb	0.339 (34%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/7321)	2'2 5/8"	0.160 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.019 (L/2963)	2'2 11/16"	0.160 (L/360)	0.120 (12%)	L	L
TL Defl inch	0.027 (L/2109)	2'2 11/16"	0.239 (L/240)	0.110 (11%)	D+L	L

Design Notes

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5 Bottom braced at bearings.
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LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
December 18, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-3-5 to 4-3-5		Far Face	117 PLF	313 PLF	0 PLF	0 PLF	
2	Tie-In	0-4-2 to 1-8-14	(Span)1-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-10-10		Near Face	879 lb	2169 lb	0 lb	0 lb	F11
4	Tie-In	2-0-6 to 5-3-5	(Span)1-2-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	4-11-5		Far Face	114 lb	303 lb	0 lb	0 lb	J6
	Self Weight				10 PLF				

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