

Engineering Note Page (ENP-2)
 REVISION 2021-10-04
 OF PERMITS
 Dec 06 2023
MHP 23020
Please read all to installation of the component
 PER: *[Signature]*
 CHIEF BUILDING OFFICIAL

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.
5. It is assumed that each LVL beam where not seated in a hanger is attached using (4) four 3-1/4" common spiral nails for up to 5.5" long bearings and using (6) six 3-1/4" common spiral nails for bearings equal to or longer than 5.5", unless indicated otherwise.

HANDLING AND INSTALLATION

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



Conventional Connections (Solid Sawn material including LFL)

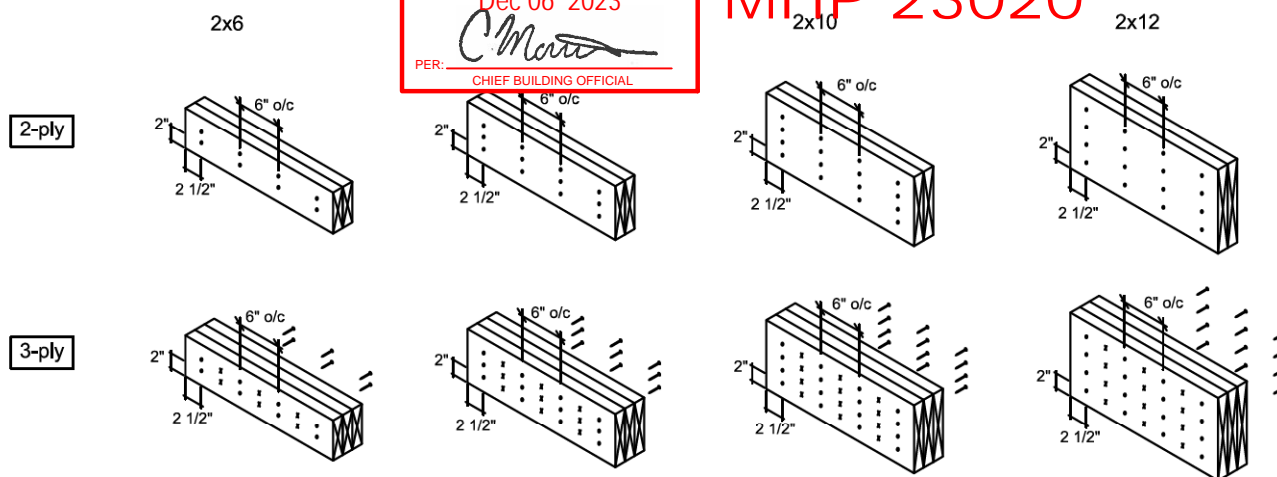
CORPORATION OF THE CITY OF OSHAWA

TRUE COPY
OF PERMIT PLANS

Dec 06 2023

PER: *C. Moore*
CHIEF BUILDING OFFICIAL

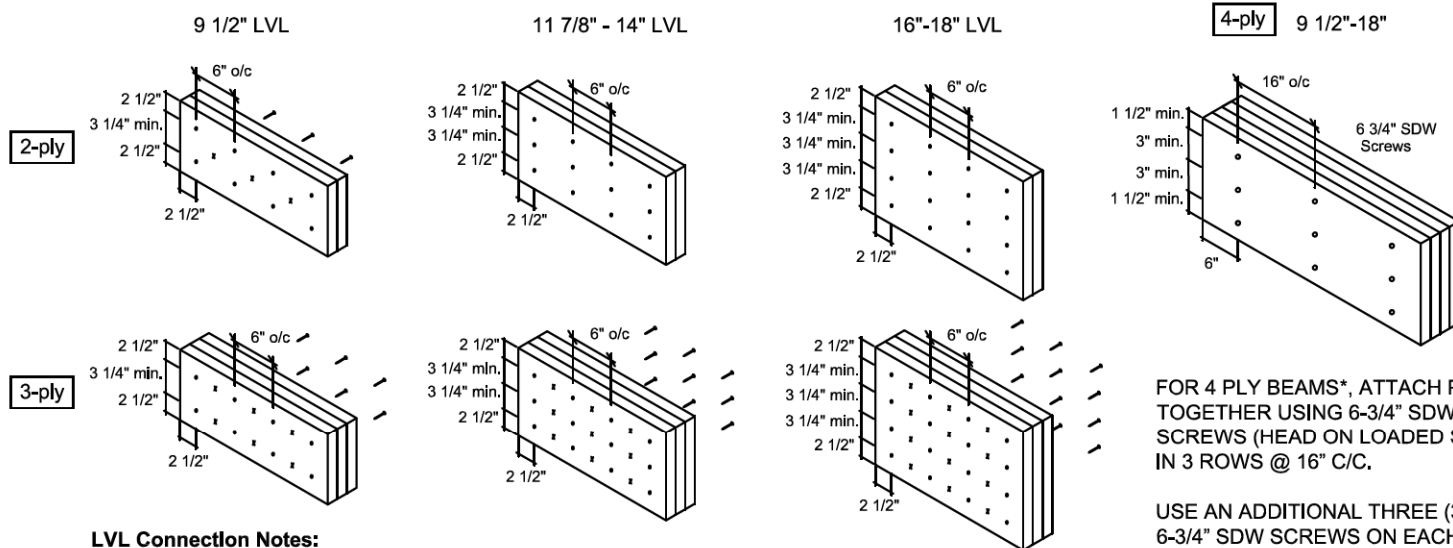
MHP 23020



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



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 driven from the opposite side.
- Head of all specified screws must be on the loaded side.

FOR 4 PLY BEAMS*, ATTACH PLYS TOGETHER USING 6-3/4" SDW SCREWS (HEAD ON LOADED SIDE) IN 3 ROWS @ 16" C/C.

USE AN ADDITIONAL THREE (3) 6-3/4" SDW SCREWS ON EACH SIDE (OF EACH FACE) AT POINT LOAD LOCATIONS @ 1/2 SPACING, WHERE APPLICABLE.

*UNLESS NOTED OTHERWISE ON LAYOUT OR CALCULATION SHEET OF BEAM IN THE FLOOR PACKAGE

Multiple Member Connections

All connections are for uniformly distributed loads.

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

Last revised: MAY 17, 2022

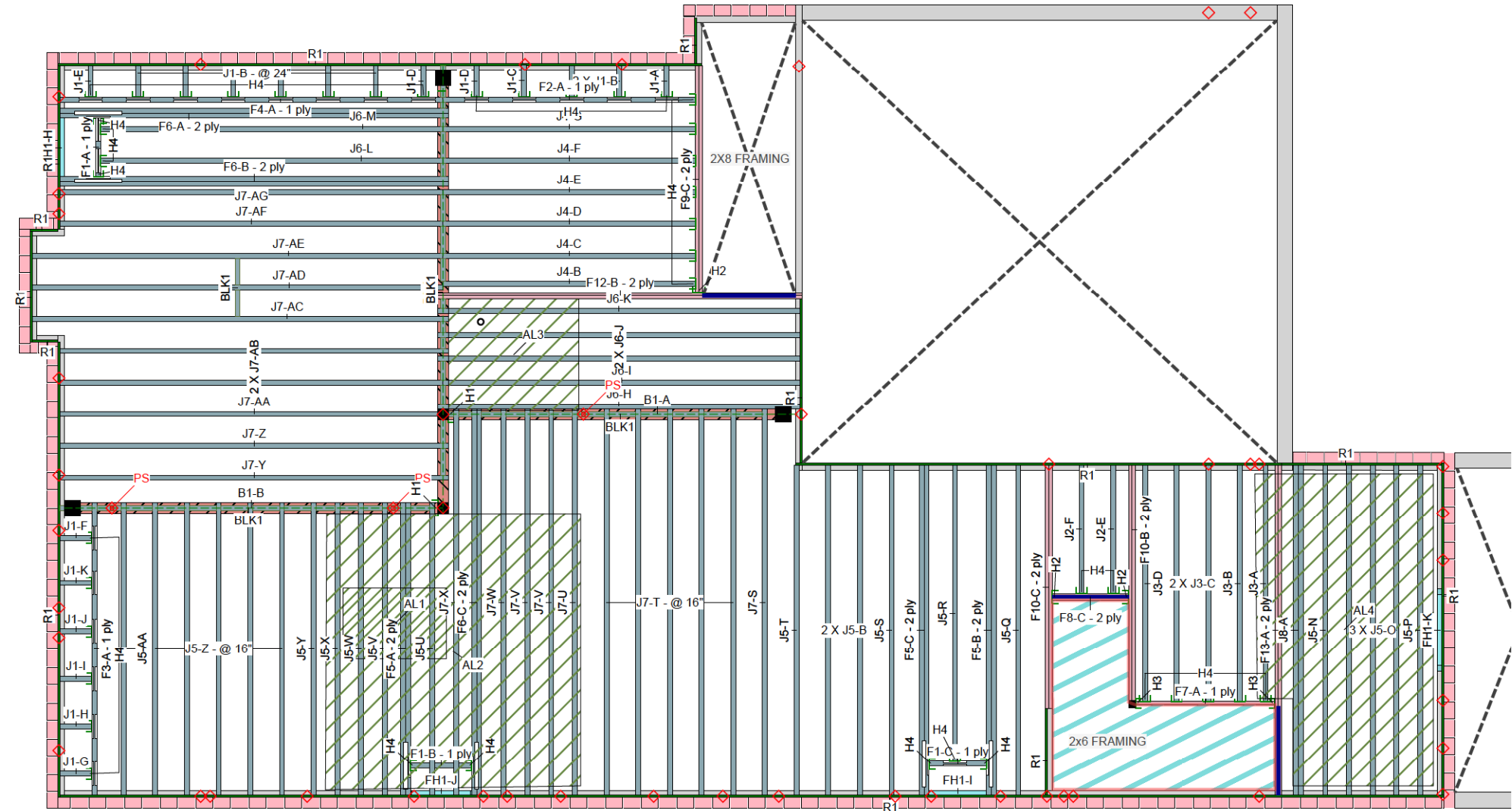


KOTT Inc.
3228 Moodie Drive
Ottawa, ON
K2H 7V1
613-838-2775

Ground Floor



MHP 23020



Ground Floor LVL/LSL (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F12	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	16-0-0
F13	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	14-0-0
F10	Forex 2.0E-3000Fb LVL	1.75	11.875	2	2	4	12-0-0
F9	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	10-0-0
F7	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 (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J7	AJS 140	2.5	11.875			21	18-0-0
J6	AJS 140	2.5	11.875			7	16-0-0
J5	AJS 140	2.5	11.875			22	14-0-0
J8	AJS 140	2.5	11.875	1	2	2	14-0-0
J4	AJS 140	2.5	11.875			6	12-0-0
J3	AJS 140	2.5	11.875			5	10-0-0
J2	AJS 140	2.5	11.875			2	6-0-0
J1	AJS 140	2.5	11.875			19	2-0-0
F6	AJS 140	2.5	11.875	3	2	6	18-0-0
F4	AJS 140	2.5	11.875			1	18-0-0
F5	AJS 140	2.5	11.875	3	2	6	14-0-0
F3	AJS 140	2.5	11.875			1	14-0-0
F2	AJS 140	2.5	11.875			1	12-0-0
F1	AJS 140	2.5	11.875			3	4-0-0

Rim Board							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			15	12-0-0

Blocking							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 140	2.5	11.875	LinFt		Varies	38-0-0

Hanger							
				Beam/Girder		Supported Member	
Label	Pcs	Description	Skew	Slope	fasteners	fasteners	
H1	2	Hanger by Others					
H2	3	LF3511			12 10d	2 #8x1 1/4WS	
H3	2	HUS1.81/10			30 16d	10 16d	
H4	42	LF2511			12 10d	1 #8x1 1/4WS	

Legend	
PS	Point Load Support
Load from Above	
Wall	
Wall Opening	
Norbord Rimboard Plus 1.125 X 11.875	
AJS 140 11.875	
Forex 2.0E-3000Fb LVL 1.75 X 11.875	
1.75 X 9.5 (Dropped)	
5.25 X 8 (Dropped)	

JOB INFORMATION	
Builder	GREENPARK
Project	ZADORRA ESTATES
Shipping	PENROSE 3 EL 1 OSHAWA, ON
Sales Rep	
Designer	W C
Plotted	June 01, 2022
Layout Name	PENROSE 3-EL 1
Job Path	C:\Users\wcadavid\Desktop\PENROSE 3-EL 1.isl
DESIGN CRITERIA	
Ground Floor	
Design Method	LSD (Canada)
Building Code	NBCC 2015 / OBC 2012
Floor Loads	
Live	40
Dead	15
Deflection Joist	
LL Span L/	480
TL Span L/	240
Deflection Flush Girder	
LL Span L/	480
TL Span L/	240
Deflection Dropped Girder	
LL Span L/	480
TL Span L/	240
Deflection Header	
LL Span L/	480
TL Span L/	240
Decking	
Decking	OSB
Thickness	3/4"
CCMC References	
Boise - 12472-R , 12787-R	
LP - 12412-R	
Forex - 14056-R	

Kott Inc. 3228 Moodie Dr, Ottawa 14 Anderson Blvd, Uxbridge Ontario 613-838-2775 / 905-642-4400	
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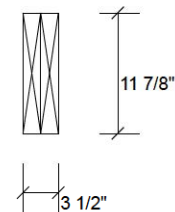
Hatch Area represents where additional load has been applied. (e.g. 5 psf for ceramic tile)

AJS140 I-Joists can be substituted with LP20 I-Joists for 9.5" and 11.875" depths shown on this layout.

1. All blocking to be cut from 12' joists
2. 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length
3. Ends of joists to be laterally supported
4. Packing of Steel beams and attachment by others
5. Shower and water closet flange locations are approximate only, consult architectural drawing for exact locations
6. Beams identified as "B" are dropped and supplied by others
7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls
8. Load transfer blocks to be installed under all point loads
9. Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
10. Hangers and Fasteners to be installed as per manufacturer
11. Framing shown on this layout may deviate from architectural drawings. Arch / Eng to review and approve the deviation prior to construction.
12. Multi ply beams with side loading to have all fasteners installed with the head on the side of the applied load

Project#: ZADORRA ESTATES
Level: Ground Floor

PER: _____
CHIEF BUILDING OFFICIAL



Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	822	380	0	0
2	Vertical	259	153	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	19%	475 / 1232	1707	L	1.25D+1.5L
2 - SPF	2.375"	Vert	11%	191 / 388	579	L	1.25D+1.5L

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2141 ft-lb	4'8 1/16"	34261 ft-lb	0.063 (6%)	1.25D+1.5L	L
Unbraced	2141 ft-lb	4'8 1/16"	34261 ft-lb	0.063 (6%)	1.25D+1.5L	L
Shear	533 lb	1'3 3/8"	11596 lb	0.046 (5%)	1.25D+1.5L	L
Perm Defl in.	0.010 (L/12147)	4'11 5/16"	0.329 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.018 (L/6663)	4'10 11/16"	0.246 (L/480)	0.072 (7%)	L	L
TL Defl inch	0.027 (L/4303)	4'10 15/16"	0.493 (L/240)	0.056 (6%)	D+L	L



June 23, 2022

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 6 Bottom must be laterally braced at a maximum of 5'6 5/8" o.c.
- 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.**

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-11	1-9-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-2-4		Near Face	223 lb	559 lb	0 lb	0 lb	F7
3	Tie-In	0-3-2 to 10-2-10	0-3-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	4-6-5 to 4-9-13	1-9-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	4-8-1		Far Face	126 lb	291 lb	0 lb	0 lb	F8

Continued on page 2...

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

Lumber

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

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

Forex
APA: PR-I 318

Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 2 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #:

ZADORRA ESTATES

Level: Ground Floor

F10-B Forex 2.0E-3000Fb LVL

1.75

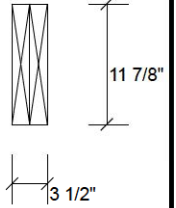
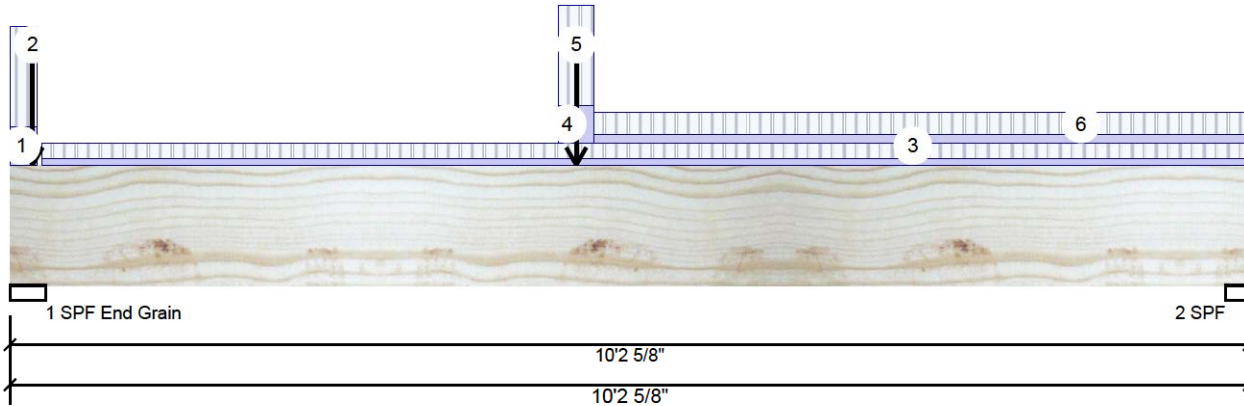
2-Ply

PASSED

Level: Ground Floor

PER:

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...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Tie-In	4-9-13 to 10-2-10	0-4-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				



June 23, 2022

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, 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 Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 3 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #: ZADORRA ESTATES

Level: Ground Floor

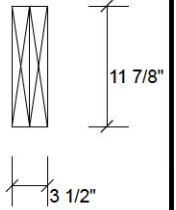
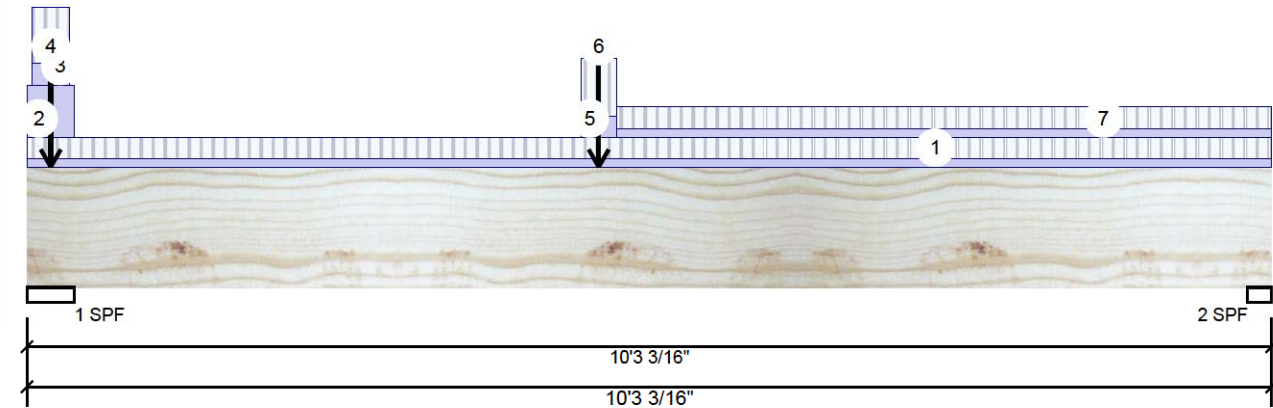
F10-C Forex 2.0E-3000Fb LVL

1.75

2-Ply

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MILP 23020



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	693	413	0	0
2	Vertical	363	191	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.703"	Vert	15%	517 / 1039	1556	L	1.25D+1.5L
2 - SPF	2.375"	Vert	15%	239 / 544	783	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2440 ft-lb	4'8 9/16"	34261 ft-lb	0.071 (7%)	1.25D+1.5L	L
Unbraced	2440 ft-lb	4'8 9/16"	34261 ft-lb	0.071 (7%)	1.25D+1.5L	L
Shear	656 lb	9' 15/16"	11596 lb	0.057 (6%)	1.25D+1.5L	L
Perm Defl in.	0.011 (L/10723)	5' 1 1/8"	0.327 (L/360)	0.034 (3%)	D	Uniform
LL Defl inch	0.021 (L/5547)	5' 15/16"	0.245 (L/480)	0.087 (9%)	L	L
TL Defl inch	0.032 (L/3656)	5' 1"	0.490 (L/240)	0.066 (7%)	D+L	L



June 23, 2022

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 7 Bottom must be laterally braced at a maximum of 5'6 5/8" o.c.
- 8 Lateral slenderness ratio based on full section width.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-3-3	0-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-4-11		Top	64 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Tie-In	0-0-9 to 0-4-3	1-9-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	

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

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 Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 4 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #: ZADORRA ESTATES

Level: Ground Floor

F10-C Forex 2.0E-3000Fb LVL

1.75

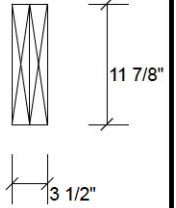
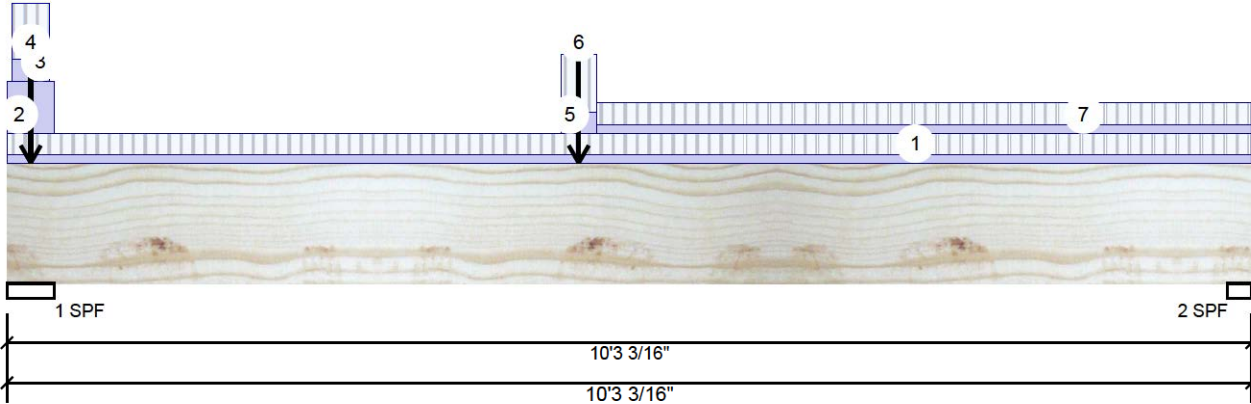
2-Ply

PASSED

Level: Ground Floor

PER:

CHIEF BUILDING OFFICIAL



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Point	0-2-6		Top	199 lb	346 lb	0 lb	0 lb	F10 F10
	Bearing Length	0-3-8							
5	Tie-In	4-6-13 to 4-10-5	1-9-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	4-8-9		Near Face	112 lb	254 lb	0 lb	0 lb	F8
7	Tie-In	4-10-5 to 10-3-3	0-8-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				



June 23, 2022

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Date: 6/1/2022

Page 5 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #: ZADORRA ESTATES

Level: Ground Floor

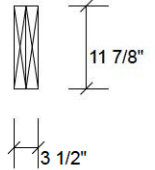
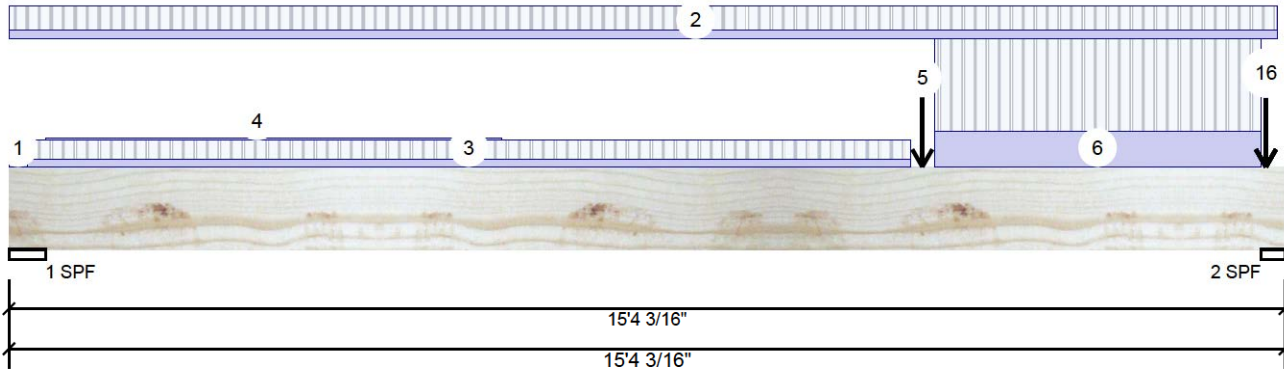
F12-B Forex 2.0E-3000Fb LVL

1.75

2-Ply

PASSED

MILP 23020

 PER:
 CHIEF BUILDING OFFICIAL


Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	481	272	0	0
2	Vertical	1048	533	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	9%	339 / 722	1062	L	1.25D+1.5L
2 - SPF	3.500"	Vert	30%	666 / 1572	2238	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7739 ft-lb	10'11 13/16"	34261 ft-lb	0.226 (23%)	1.25D+1.5L	L
Unbraced	7739 ft-lb	10'11 13/16"	34261 ft-lb	0.226 (23%)	1.25D+1.5L	L
Shear	2022 lb	14' 13/16"	11596 lb	0.174 (17%)	1.25D+1.5L	L
Perm Defl in.	0.065 (L/2728)	8'4 13/16"	0.491 (L/360)	0.132 (13%)	D	Uniform
LL Defl inch	0.131 (L/1350)	8'6 1/2"	0.369 (L/480)	0.355 (36%)	L	L
TL Defl inch	0.196 (L/903)	8'5 15/16"	0.737 (L/240)	0.266 (27%)	D+L	L

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 3.5.
- 2 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 7 Bottom must be laterally braced at a maximum of 10'11 13/16" o.c.
- 8 Lateral slenderness ratio based on full section width.



June 23, 2022

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-10	0-2-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 15-3-1	0-3-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-10 to 10-10-1	0-3-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	0-5-5 to 5-11-3		Top	1 PLF	0 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 6 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #:

ZADORRA ESTATES

Level: Ground Floor

F12-B Forex 2.0E-3000Fb LVL

1.75

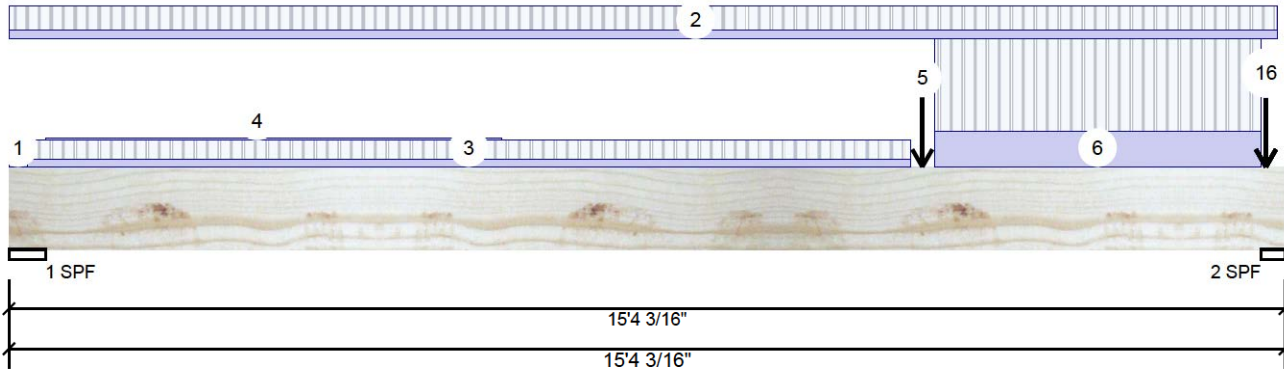
2-Ply

PASSED

MILP 23020

PER: *C. Morris*

CHIEF BUILDING OFFICIAL



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Point	10-11-13		Far Face	421 lb	1002 lb	0 lb	0 lb	F9
6	Part. Uniform	11-1-9 to 15-0-11		Top	19 PLF	50 PLF	0 PLF	0 PLF	
7	Point	15-1-7		Top	1 lb	1 lb	0 lb	0 lb	
	Bearing Length	0-5-8							
8	Point	15-1-7		Top	7 lb	17 lb	0 lb	0 lb	J6
	Bearing Length	0-5-8							
10	Point	15-1-7		Top	7 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
11	Point	15-1-7		Top	1 lb	2 lb	0 lb	0 lb	
	Bearing Length	0-5-8							
13	Point	15-1-7		Top	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
14	Point	15-1-7		Top	1 lb	2 lb	0 lb	0 lb	
	Bearing Length	0-5-8							
16	Point	15-1-7		Top	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
	Self Weight				10 PLF				



June 23, 2022

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, 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 Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 7 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #: ZADORRA ESTATES

Level: Ground Floor

F13-A Forex 2.0E-3000Fb LVL

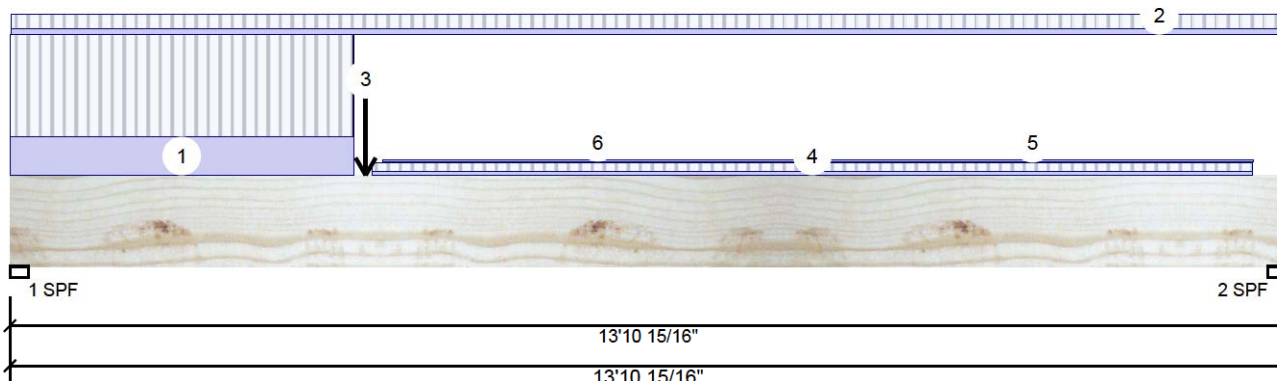
1.75

2-Ply

PASSED

PER:

CHIEF BUILDING OFFICIAL



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	942	450	0	0
2	Vertical	390	238	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	39%	562 / 1413	1975	L	1.25D+1.5L
2 - SPF	2.375"	Vert	17%	298 / 585	883	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5329 ft-lb	3'10 9/16"	34261 ft-lb	0.156 (16%)	1.25D+1.5L	L
Unbraced	5329 ft-lb	3'10 9/16"	34261 ft-lb	0.156 (16%)	1.25D+1.5L	L
Shear	1661 lb	1'2 1/4"	11596 lb	0.143 (14%)	1.25D+1.5L	L
Perm Defl in.	0.042 (L/3855)	6'5 1/4"	0.455 (L/360)	0.093 (9%)	D	Uniform
LL Defl inch	0.081 (L/2032)	6'3 1/8"	0.341 (L/480)	0.236 (24%)	L	
TL Defl inch	0.123 (L/1331)	6'3 7/8"	0.682 (L/240)	0.180 (18%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 6 Bottom must be laterally braced at a maximum of 10' 3/8" o.c.
- 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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-8-15		Top	44 PLF	117 PLF	0 PLF	0 PLF	
2	Tie-In	0-0-3 to 13-10-15	0-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	3-10-8		Far Face	237 lb	560 lb	0 lb	0 lb	F7
4	Tie-In	3-11-6 to 13-6-9	0-3-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Part. Uniform	4-0-13 to 13-6-9		Top	1 PLF	0 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 8 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #: ZADORRA ESTATES

F13-A Forex 2.0E-3000Fb LVL

1.75

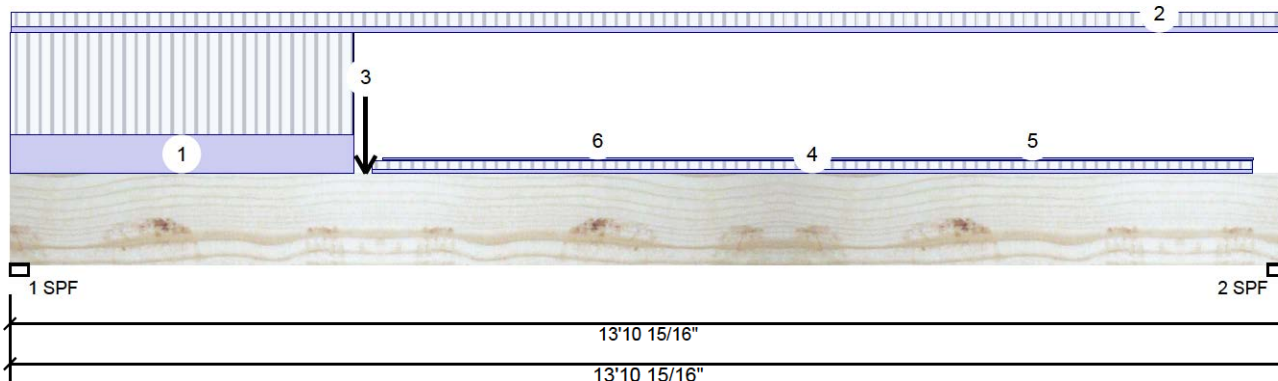
2-Ply

PASSED

Level: Ground Floor

PER:

CHIEF BUILDING OFFICIAL



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Part. Uniform	4-0-13 to 13-6-11		Top	2 PLF	0 PLF	0 PLF	0 PLF	
	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.

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 9 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

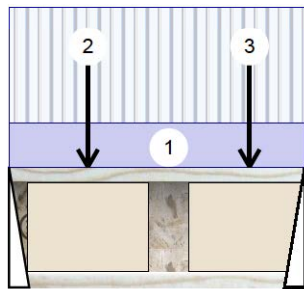
Address: PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

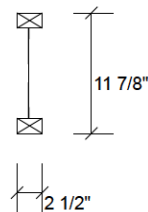
Project #: ZADORRA ESTATES

Level: Ground Floor

F1-A AJS 140 11.875" - PAS

PER: CHIEF BUILDING OFFICIAL


1 Hanger (LF2511)
2 Hanger (LF2511)
2'5 1/4"
2'5 1/4"



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	323	121	0	0
2	Vertical	359	134	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	40%	151 / 485	636	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	44%	168 / 539	707	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	334 ft-lb	7 13/16"	5305 ft-lb	0.063 (6%)	1.25D+1.5L	L
Unbraced	334 ft-lb	7 13/16"	5305 ft-lb	0.063 (6%)	1.25D+1.5L	L
Shear	700 lb	2'4"	2350 lb	0.298 (30%)	1.25D+1.5L	L
Perm Defl in. (L/24915)	0.001	10 3/8"	0.074 (L/360)	0.014 (1%)	D	Uniform
LL Defl inch	0.003 (L/9325)	10 3/8"	0.056 (L/480)	0.051 (5%)	L	L
TL Defl inch	0.004 (L/6785)	10 3/8"	0.112 (L/240)	0.035 (4%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 5 If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.



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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-5-4	0-9-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-7-13		Near Face	118 lb	315 lb	0 lb	0 lb	J6
3	Point	1-11-13		Near Face	107 lb	287 lb	0 lb	0 lb	J6

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. Lumber must not be treated with fire retardant or corrosive chemicals

chemicals

Handling & Installation

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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 10 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

TRUE COPY
OF PERMIT PLANS
PENROSE 3-EL 1
OSHAWA, ON
Dec 06 2023

Job Name: PENROSE 3-EL 1

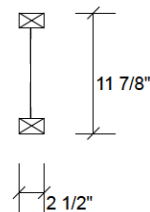
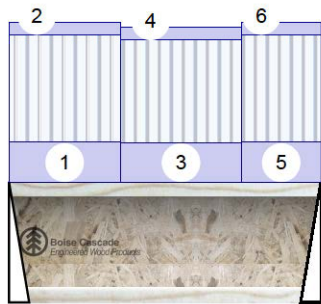
Project #: ZADORRA ESTATES

Level: Ground Floor

F1-B AJS 140 11.875" - PAS

PER:

CHIEF BUILDING OFFICIAL



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	33	16	0	0
2	Vertical	33	16	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	4%	20 / 49	69	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	4%	20 / 49	69	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	37 ft-lb	1'3 3/8"	5305 ft-lb	0.007 (1%)	1.25D+1.5L	L
Unbraced	37 ft-lb	1'3 3/8"	5305 ft-lb	0.007 (1%)	1.25D+1.5L	L
Shear	64 lb	1 1/4"	2350 lb	0.027 (3%)	1.25D+1.5L	L
Perm Defl in. (L/183158)	0.000	1'3 7/16"	0.079 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch (L/90435)	0.000	1'3 7/16"	0.059 (L/480)	0.005 (1%)	L	L
TL Defl inch (L/60542)	0.000	1'3 7/16"	0.118 (L/240)	0.004 (0%)	D+L	L



Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 5 Bottom flange must be laterally braced at 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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-11-0	0-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-11-0		Top	3 PLF	0 PLF	0 PLF	0 PLF	
3	Tie-In	0-11-0 to 1-11-0	0-7-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	0-11-0 to 1-11-0		Top	3 PLF	0 PLF	0 PLF	0 PLF	

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. Lumber must not be treated with fire retardant or corrosive chemicals

chemicals

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400





Client: GREENPARK

Date: 6/1/2022

Page 11 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #:

ZADORRA ESTATES

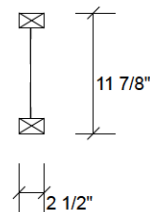
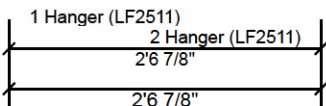
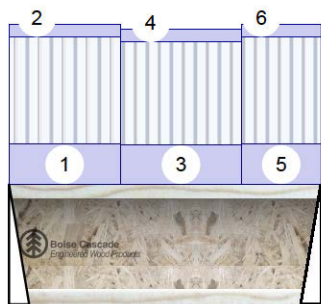
Level: Ground Floor

F1-B AJS 140 11.875" - PAS

PER:

CHIEF BUILDING OFFICIAL

MHP 23020



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Tie-In	1-11-0 to 2-6-14	0-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Part. Uniform	1-11-0 to 2-6-14		Top	3 PLF	0 PLF	0 PLF	0 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 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. Lumber 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

This design is valid until 5/24/2024

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400





Client: GREENPARK

Date: 6/1/2022

Page 12 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

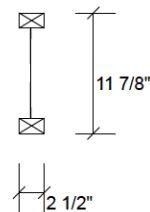
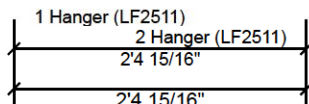
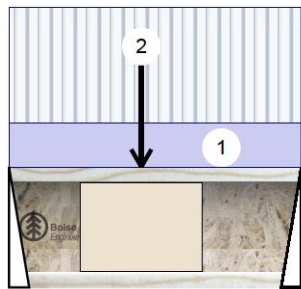
Project #: ZADORRA ESTATES

Level: Ground Floor

F1-C AJS 140 11.875" - PAS

PER: *C. Morris*
CHIEF BUILDING OFFICIAL

MHP 23020



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	228	85	0	0
2	Vertical	191	72	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	28%	107 / 341	448	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	23%	89 / 286	376	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	410 ft-lb	1'1 1/8"	5305 ft-lb	0.077 (8%)	1.25D+1.5L	L
Unbraced	410 ft-lb	1'1 1/8"	5305 ft-lb	0.077 (8%)	1.25D+1.5L	L
Shear	442 lb	1 1/4"	2350 lb	0.188 (19%)	1.25D+1.5L	L
Perm Defl in. (L/20139)	0.001	1'1 1/16"	0.073 (L/360)	0.018 (2%)	D	Uniform
LL Defl inch	0.004 (L/7552)	1'1 1/16"	0.055 (L/480)	0.064 (6%)	L	L
TL Defl inch	0.005 (L/5492)	1'1 1/16"	0.110 (L/240)	0.044 (4%)	D+L	L



Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 5 If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-4-15	0-8-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-1-1		Far Face	132 lb	352 lb	0 lb	0 lb	J5

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. Lumber is to be treated with fire retardant or corrosive chemicals

chemicals

Handling & Installation

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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 13 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

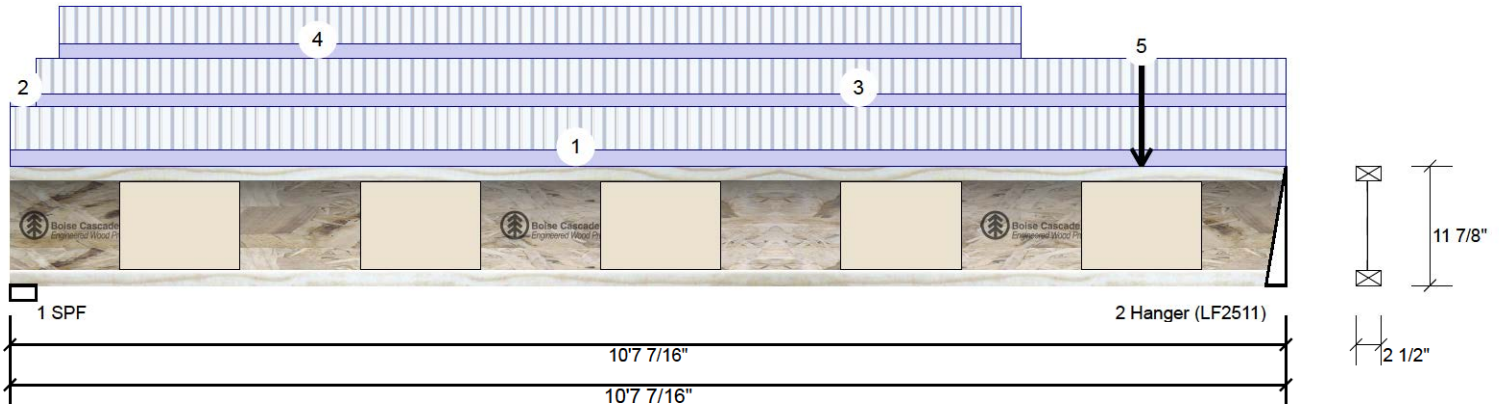
Project #: ZADORRA ESTATES

Level: Ground Floor

F2-A AJS 140 11.875" - PAS

PER: 
CHIEF BUILDING OFFICIAL

MHP 23020



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	419	157	0	0
2	Vertical	416	156	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.625"	Vert	48%	196 / 629	825	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	51%	195 / 623	818	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2137 ft-lb	5'3 15/16"	5305 ft-lb	0.403 (40%)	1.25D+1.5L	L
Unbraced	2137 ft-lb	5'3 15/16"	5305 ft-lb	0.403 (40%)	1.25D+1.5L	L
Shear	812 lb	1 7/8"	2350 lb	0.346 (35%)	1.25D+1.5L	L
Perm Defl in.	0.031 (L/3995)	5'4"	0.345 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.083 (L/1494)	5'4"	0.259 (L/480)	0.321 (32%)	L	
TL Defl inch	0.114 (L/1087)	5'4"	0.518 (L/240)	0.221 (22%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 5 Bottom flange must be laterally braced at a maximum of 2' o.c.



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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-7-7	0-9-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-2-10	0-3-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-10 to 10-7-7	0-7-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	0-4-15 to 8-5-0		Far Face	10 PLF	27 PLF	0 PLF	0 PLF	
5	Point	9-5-0		Far Face	17 lb	44 lb	0 lb	0 lb	J1

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. Lumber must not 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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 14 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

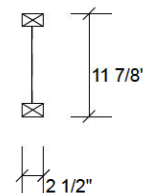
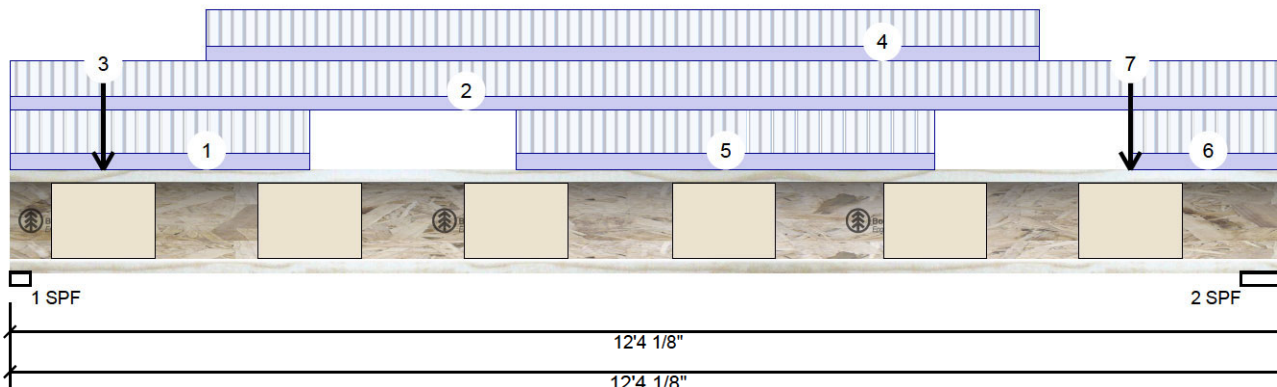
Project #: ZADORRA ESTATES

Level: Ground Floor

F3-A AJS 140 11.875" - PAS

Dec 06 2023

MHP 23020

PER: 
CHIEF BUILDING OFFICIAL

Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	428	162	0	0
2	Vertical	435	164	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	50%	202 / 642	844	L	1.25D+1.5L
2 - SPF	5.250"	Vert	45%	205 / 652	857	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2445 ft-lb	6'2 1/4"	5305 ft-lb	0.461 (46%)	1.25D+1.5L	L
Unbraced	2445 ft-lb	6'2 1/4"	5305 ft-lb	0.461 (46%)	1.25D+1.5L	L
Shear	830 lb	1 5/8"	2350 lb	0.353 (35%)	1.25D+1.5L	L
Perm Defl in.	0.044 (L/3193)	6'1 1/16"	0.394 (L/360)	0.113 (11%)	D	Uniform
LL Defl inch	0.117 (L/1208)	6'1 1/16"	0.296 (L/480)	0.397 (40%)	L	
TL Defl inch	0.162 (L/877)	6'1 1/16"	0.592 (L/240)	0.274 (27%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at a maximum of 2' 1/2" o.c.



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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-10-13	0-9-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 12-4-2	0-7-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-10-13		Far Face	15 lb	39 lb	0 lb	0 lb	J1
4	Part. Uniform	1-10-12 to 9-11-7		Far Face	10 PLF	26 PLF	0 PLF	0 PLF	
5	Tie-In	4-10-12 to 8-11-6	0-9-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Tie-In	10-10-1 to 12-4-2	0-9-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Point	10-10-1		Far Face	22 lb	58 lb	0 lb	0 lb	J1

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. Lumber must not 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

This design is valid until 5/24/2024

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400





Client: GREENPARK

Date: 6/1/2022

Project:

Input by: W C

Address:

Job Name: PENROSE 3-EL 1

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY
OF PERMIT PLANS
OSHAWA, ON
Dec 06 2023

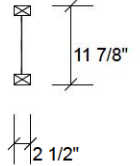
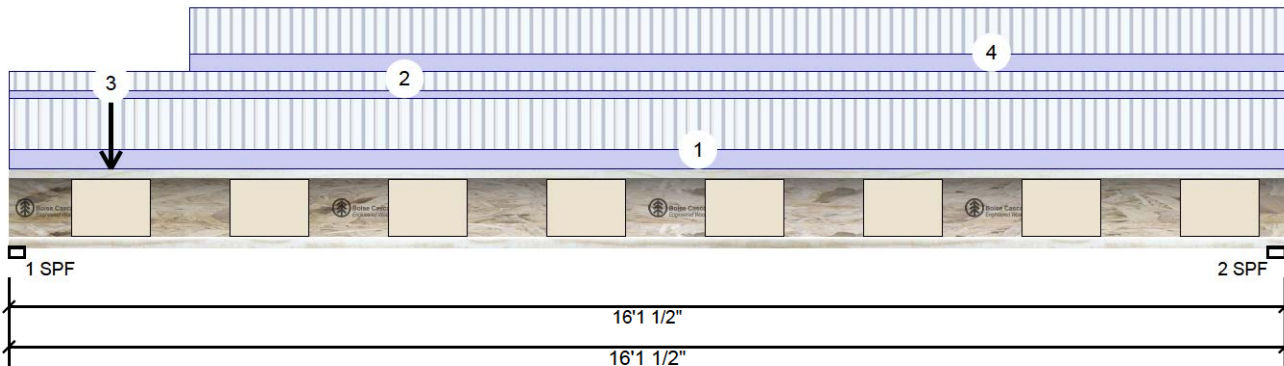
Project #: ZADORRA ESTATES

Level: Ground Floor

F4-A AJS 140 11.875" - PAS

PER: *C. Morris*
CHIEF BUILDING OFFICIAL

MHP 23020



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	532	198	0	0
2	Vertical	549	205	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	62%	248 / 797	1045	L	1.25D+1.5L
2 - SPF	2.625"	Vert	62%	256 / 824	1080	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4186 ft-lb	8' 3/4"	5305 ft-lb	0.789 (79%)	1.25D+1.5L	L
Unbraced	4186 ft-lb	8' 3/4"	5305 ft-lb	0.789 (79%)	1.25D+1.5L	L
Shear	1059 lb	15'11 5/8"	2350 lb	0.451 (45%)	1.25D+1.5L	L
Perm Defl in.	0.127 (L/1499)	8' 11/16"	0.528 (L/360)	0.240 (24%)	D	Uniform
LL Defl inch	0.340 (L/559)	8' 11/16"	0.396 (L/480)	0.858 (86%)	L	
TL Defl inch	0.466 (L/407)	8' 11/16"	0.792 (L/240)	0.589 (59%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 4 Bottom flange must be laterally braced at a maximum of 2' o.c.



June 23, 2022

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 16-1-8	0-9-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-1-8	0-3-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-3-8		Far Face	16 lb	44 lb	0 lb	0 lb	J1
4	Part. Uniform	2-3-8 to 16-1-8		Far Face	10 PLF	27 PLF	0 PLF	0 PLF	

Notes

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

Lumber

1. Dry service conditions, unless noted otherwise
2. Lumber must not 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

This design is valid until 5/24/2024

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400





Client: GREENPARK

Date: 6/1/2022

Page 16 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #:

ZADORRA ESTATES

Level: Ground Floor

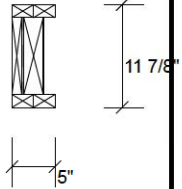
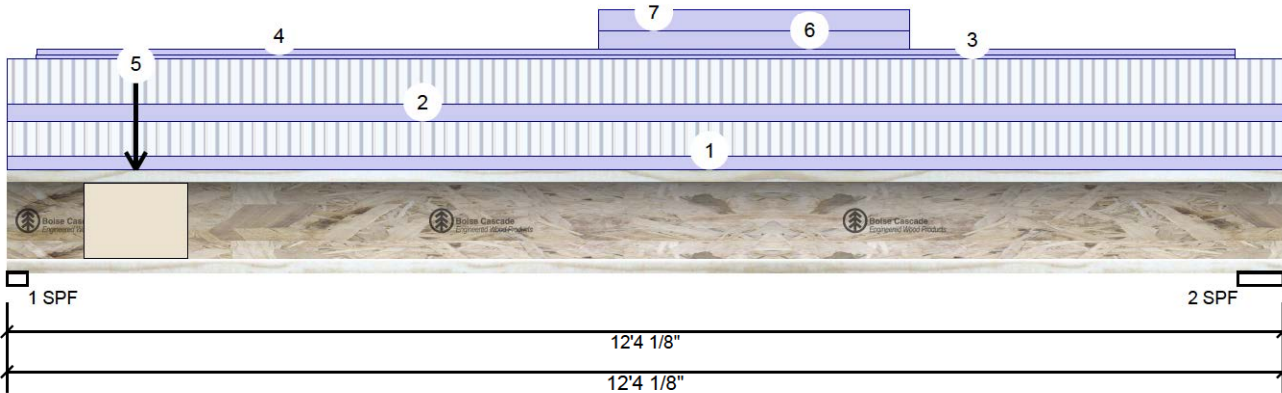
F5-A AJS 140 11.875"

2-P

PER:

CHIEF BUILDING OFFICIAL

MHP 23020



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	272	158	0	0
2	Vertical	255	161	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	18%	198 / 408	606	L	1.25D+1.5L
2 - SPF	5.250"	Vert	15%	201 / 382	583	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1704 ft-lb	6'2 5/16"	10610 ft-lb	0.161 (16%)	1.25D+1.5L	L
Unbraced	1704 ft-lb	6'2 5/16"	10610 ft-lb	0.161 (16%)	1.25D+1.5L	L
Shear	595 lb	1 5/8"	4700 lb	0.127 (13%)	1.25D+1.5L	L
Perm Defl in.	0.024 (L/6027)	6'2 1/16"	0.394 (L/360)	0.060 (6%)	D	Uniform
LL Defl inch	0.034 (L/4121)	6' 1/4"	0.296 (L/480)	0.116 (12%)	L	
TL Defl inch	0.058 (L/2448)	6'1"	0.592 (L/240)	0.098 (10%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 6 Bottom flange must be laterally braced at a maximum of 11'1 1/8" o.c.



June 23, 2022

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-4-2	0-5-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 12-4-2	0-6-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-3-6 to 11-10-8		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-3-7 to 11-10-8		Top	3 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-2-15		Near Face	16 lb	33 lb	0 lb	0 lb	F1

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. Lumber is to be treated with fire retardant or corrosive

chemicals

Handling & Installation

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

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

This design is valid until 5/24/2024

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400





Client: GREENPARK

Date: 6/1/2022

Page 17 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #:

ZADORRA ESTATES

Level: Ground Floor

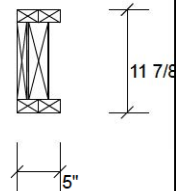
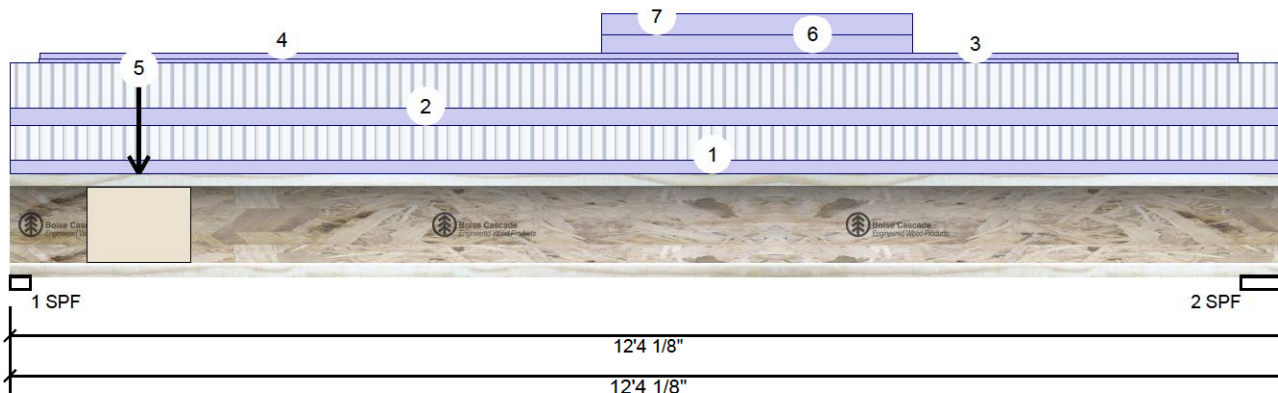
F5-A AJS 140 11.875"

2-P

PER:

CHIEF BUILDING OFFICIAL

MHP 23020



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Part. Uniform	5-8-10 to 8-8-13		Top	9 PLF	0 PLF	0 PLF	0 PLF	
7	Part. Uniform	5-8-10 to 8-8-13		Top	11 PLF	0 PLF	0 PLF	0 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 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. Lumber 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

This design is valid until 5/24/2024

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400





Client: GREENPARK

Date: 6/1/2022

Page 18 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #: ZADORRA ESTATES

Level: Ground Floor

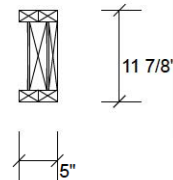
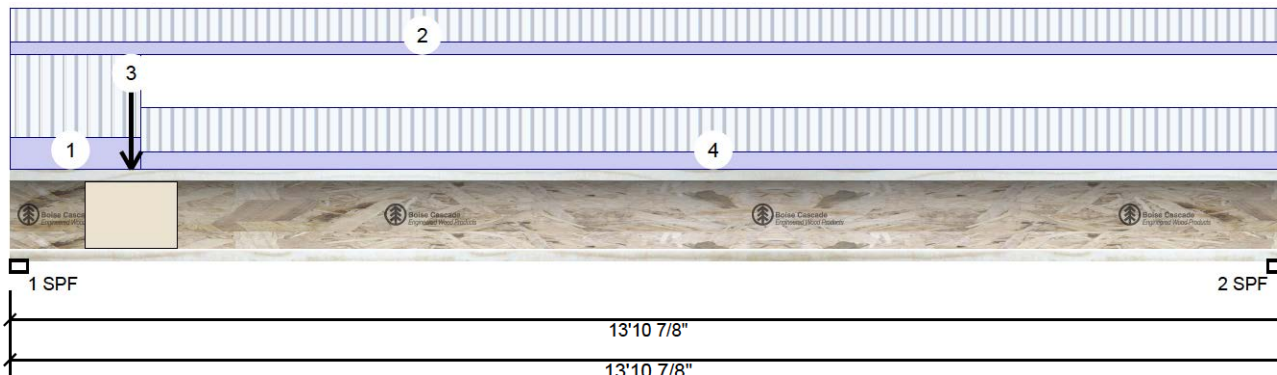
F5-B AJS 140 11.875"

2-P

PER: 

CHIEF BUILDING OFFICIAL

MHP 23020



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	580	218	0	0
2	Vertical	389	146	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.313"	Vert	34%	272 / 871	1143	L	1.25D+1.5L
2 - SPF	2.375"	Vert	23%	182 / 584	766	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2693 ft-lb	6'7 1/4"	10610 ft-lb	0.254 (25%)	1.25D+1.5L	L
Unbraced	2693 ft-lb	6'7 1/4"	10610 ft-lb	0.254 (25%)	1.25D+1.5L	L
Shear	1123 lb	1'9/16"	4700 lb	0.239 (24%)	1.25D+1.5L	L
Perm Defl in.	0.032 (L/5151)	6'9 7/8"	0.455 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.085 (L/1933)	6'9 15/16"	0.341 (L/480)	0.248 (25%)	L	
TL Defl inch	0.116 (L/1405)	6'9 15/16"	0.682 (L/240)	0.171 (17%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 6 Bottom flange must be laterally braced at a maximum of 12'7" o.c.



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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-5-2	1-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 13-10-14	0-6-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-3-14		Far Face	72 lb	191 lb	0 lb	0 lb	F1
4	Tie-In	1-5-2 to 13-10-14	0-9-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	

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. Lumber is 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

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(800) 232-0788
www.bc.com
CCMC: 12787

Kott Inc.

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This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 19 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL
OSHAWA, ON

Job Name:

PENROSE 3-EL 1

Project #:

ZADORRA ESTATES

Level:

Ground Floor

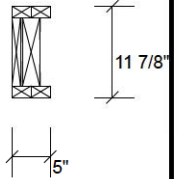
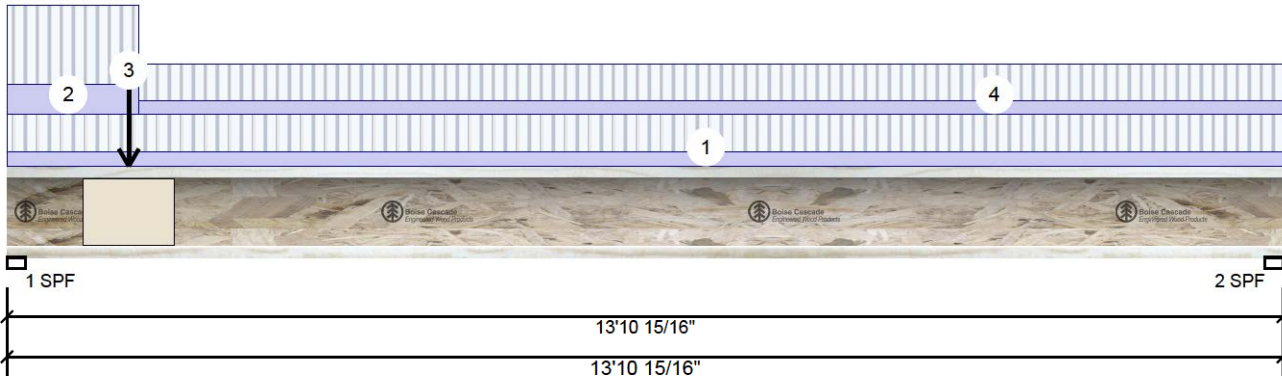
F5-C AJS 140 11.875"

2-P

PER: *C. Morris*

CHIEF BUILDING OFFICIAL

MHP 23020



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	621	232	0	0
2	Vertical	393	147	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	36%	290 / 931	1221	L	1.25D+1.5L
2 - SPF	2.375"	Vert	23%	184 / 589	773	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2743 ft-lb	6'6 9/16"	10610 ft-lb	0.259 (26%)	1.25D+1.5L	L
Unbraced	2743 ft-lb	6'6 9/16"	10610 ft-lb	0.259 (26%)	1.25D+1.5L	L
Shear	1199 lb	1 5/8"	4700 lb	0.255 (26%)	1.25D+1.5L	L
Perm Defl in.	0.032 (L/5053)	6'9 3/4"	0.455 (L/360)	0.071 (7%)	D	Uniform
LL Defl inch	0.086 (L/1894)	6'9 3/4"	0.341 (L/480)	0.253 (25%)	L	
TL Defl inch	0.119 (L/1377)	6'9 3/4"	0.682 (L/240)	0.174 (17%)	D+L	L

Design Notes

- Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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.
- If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- Bottom flange must be laterally braced at a maximum of 12'7" o.c.



June 23, 2022

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-10-15	0-8-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-1 to 1-5-3	1-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-3-15		Near Face	85 lb	228 lb	0 lb	0 lb	F1
4	Tie-In	1-5-3 to 13-10-15	0-7-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

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www.bc.com
CCMC: 12787

Kott Inc.

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613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 20 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

TRUE COPY OF PERMIT PLANS

Job Name: PENROSE 3-EL 1

PENROSE 3-EL 1

Project #: ZADORRA ESTATES

OSHAWA, ON

Level: Ground Floor

Dec 06 2023

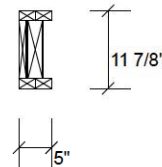
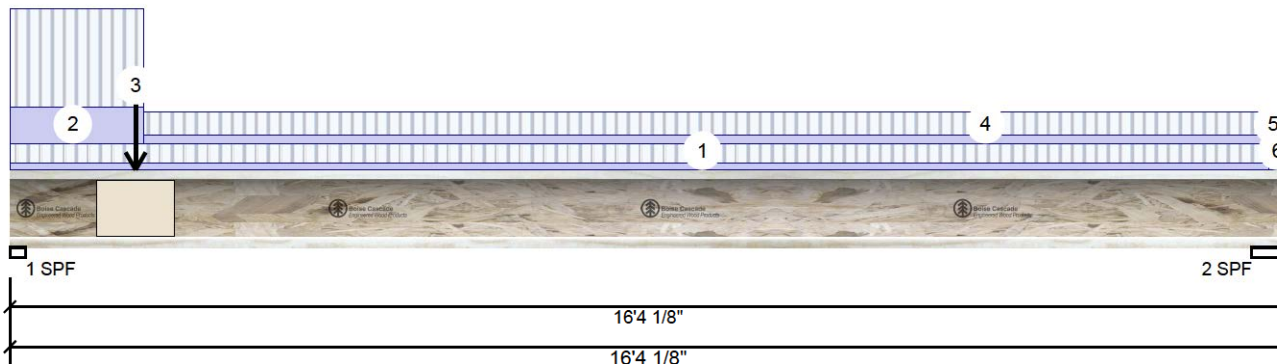
PER: *C. Morris*

CHIEF BUILDING OFFICIAL

F6-A AJS 140 11.875"

2-P

MHP 23020



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	594	222	0	0
2	Vertical	240	90	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	35%	278 / 891	1169	L	1.25D+1.5L
2 - SPF	5.250"	Vert	12%	112 / 360	472	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2138 ft-lb	6'6 9/16"	10610 ft-lb	0.201 (20%)	1.25D+1.5L	L
Unbraced	2138 ft-lb	6'6 9/16"	10610 ft-lb	0.201 (20%)	1.25D+1.5L	L
Shear	1151 lb	1 5/8"	4700 lb	0.245 (24%)	1.25D+1.5L	L
Perm Defl in.	0.033 (L/5719)	7'7 11/16"	0.528 (L/360)	0.063 (6%)	D	Uniform
LL Defl inch	0.089 (L/2142)	7'7 11/16"	0.396 (L/480)	0.224 (22%)	L	
TL Defl inch	0.122 (L/1558)	7'7 11/16"	0.792 (L/240)	0.154 (15%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 6 Bottom flange must be laterally braced at a maximum of 14'8 13/16" o.c.



June 23, 2022

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 16-1-8	0-3-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-8-9	1-5-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-7-5		Near Face	134 lb	359 lb	0 lb	0 lb	F1
4	Tie-In	1-8-9 to 16-1-8	0-4-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	16-1-8 to 16-4-2	0-4-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Tie-In	16-1-8 to 16-4-2	0-3-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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Lumber

1. Dry service conditions, unless noted otherwise
2. Lumber must not 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

This design is valid until 5/24/2024

Manufacturer Info

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www.bc.com
CCMC: 12787

Kott Inc.

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613-838-2775 / 905-642-4400





Client: GREENPARK

Date: 6/1/2022

Page 21 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #:

ZADORRA ESTATES

Level: Ground Floor

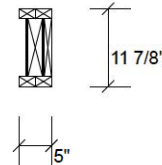
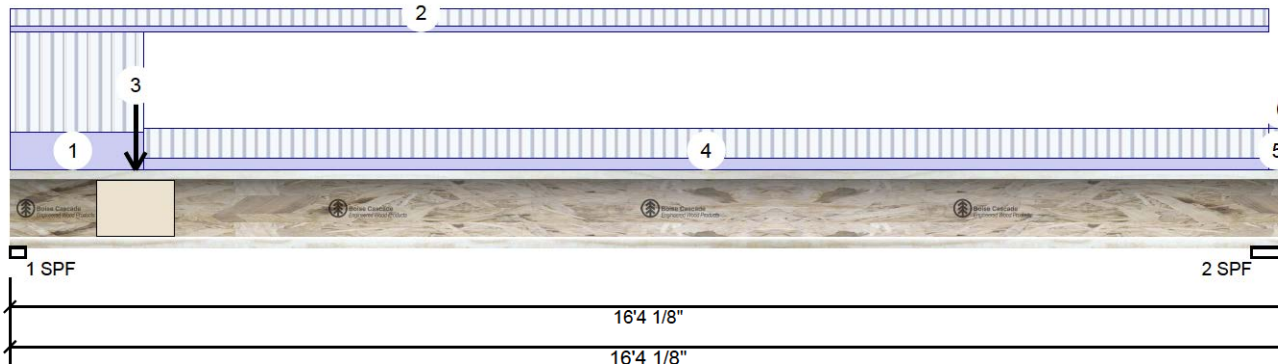
F6-B AJS 140 11.875"

2-P

PER: 

CHIEF BUILDING OFFICIAL

MHP 23020



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	573	215	0	0
2	Vertical	254	95	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	33%	268 / 859	1128	L	1.25D+1.5L
2 - SPF	5.250"	Vert	13%	119 / 381	501	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2203 ft-lb	6'9 11/16"	10610 ft-lb	0.208 (21%)	1.25D+1.5L	L
Unbraced	2203 ft-lb	6'9 11/16"	10610 ft-lb	0.208 (21%)	1.25D+1.5L	L
Shear	1110 lb	1 5/8"	4700 lb	0.236 (24%)	1.25D+1.5L	L
Perm Defl in.	0.034 (L/5541)	7'8 3/8"	0.528 (L/360)	0.065 (6%)	D	Uniform
LL Defl inch	0.091 (L/2077)	7'8 5/16"	0.396 (L/480)	0.231 (23%)	L	
TL Defl inch	0.126 (L/1511)	7'8 5/16"	0.792 (L/240)	0.159 (16%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
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- 6 Bottom flange must be laterally braced at a maximum of 14'8 13/16" o.c.



June 23, 2022

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-8-9	1-5-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-1-8	0-2-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-7-5		Far Face	121 lb	323 lb	0 lb	0 lb	F1
4	Tie-In	1-8-9 to 16-1-8	0-5-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	16-1-8 to 16-4-2	0-5-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Tie-In	16-1-8 to 16-4-2	0-2-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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Lumber

1. Dry service conditions, unless noted otherwise
2. Lumber must not 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

This design is valid until 5/24/2024

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CCMC: 12787

Kott Inc.

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Client: GREENPARK

Date: 6/1/2022

Page 22 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

TRUE COPY
OF PERMIT PLANS
PENROSE 3-EL 1
OSHAWA, ON
Dec 06 2023

Job Name: PENROSE 3-EL 1

Project #: ZADORRA ESTATES

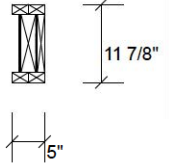
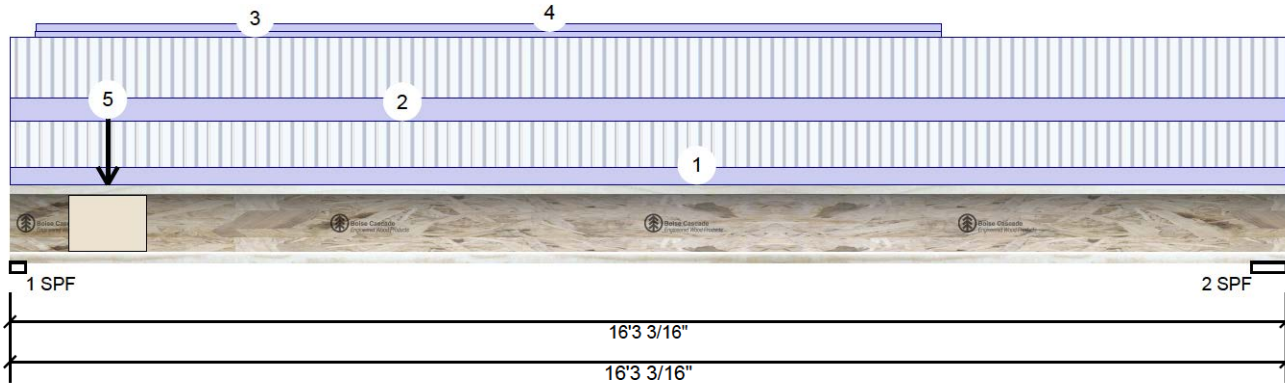
Level: Ground Floor

F6-C AJS 140 11.875"

2-P

PER: 

CHIEF BUILDING OFFICIAL



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	351	171	0	0
2	Vertical	332	147	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	22%	214 / 527	740	L	1.25D+1.5L
2 - SPF	5.250"	Vert	18%	183 / 499	682	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2651 ft-lb	7'11"	10610 ft-lb	0.250 (25%)	1.25D+1.5L	L
Unbraced	2651 ft-lb	7'11"	10610 ft-lb	0.250 (25%)	1.25D+1.5L	L
Shear	730 lb	1 5/8"	4700 lb	0.155 (16%)	1.25D+1.5L	L
Perm Defl in.	0.048 (L/3931)	7'11 3/8"	0.525 (L/360)	0.092 (9%)	D	Uniform
LL Defl inch	0.100 (L/1893)	7'11 7/8"	0.394 (L/480)	0.254 (25%)	L	
TL Defl inch	0.148 (L/1278)	7'11 3/4"	0.788 (L/240)	0.188 (19%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 6 Bottom flange must be laterally braced at a maximum of 15' 3/16" o.c.



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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 16-3-3	0-5-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-3-3	0-6-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-3-14 to 11-10-8		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-4-0 to 11-10-8		Top	3 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-2-15		Far Face	16 lb	33 lb	0 lb	0 lb	F1

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. Lumber must not 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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 23 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL 1
OSHAWA, ON

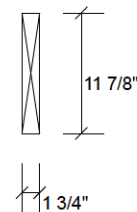
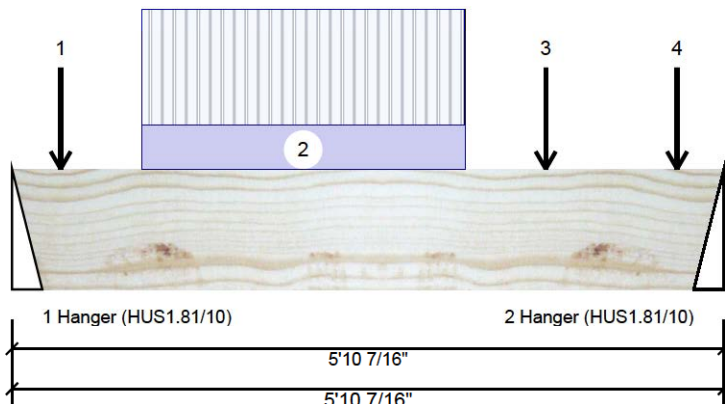
Job Name: PENROSE 3-EL 1

Project #: ZADORRA ESTATES

Level: Ground Floor

F7-A Forex 2.0E-3000Fb LVL

1

PER: *C. Morris*
CHIEF BUILDING OFFICIALMLIP 2-20-20
- PASSED

Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	559	223	0	0
2	Vertical	560	237	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	29%	279 / 838	1116	L	1.25D+1.5L
2 - Hanger	3.000"	Vert	29%	297 / 840	1137	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1428 ft-lb	2'11 1/4"	17130 ft-lb	0.083 (8%)	1.25D+1.5L	L
Unbraced	1428 ft-lb	2'11 1/4"	17130 ft-lb	0.083 (8%)	1.25D+1.5L	L
Shear	1178 lb	4'7 9/16"	5798 lb	0.203 (20%)	1.25D+1.5L	L
Perm Defl in. (L/13851)	0.005	2'11 3/8"	0.183 (L/360)	0.026 (3%)	D	Uniform
LL Defl inch	0.012 (L/5545)	2'11 5/16"	0.137 (L/480)	0.087 (9%)	L	L
TL Defl inch	0.017 (L/3960)	2'11 5/16"	0.275 (L/240)	0.061 (6%)	D+L	L



Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top must be continuously laterally braced.
- 5 Bottom must have sheathing attached or be continuously braced.

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-4-13		Far Face	70 lb	187 lb	0 lb	0 lb	J3
2	Part. Uniform	1-0-13 to 3-8-13		Far Face	74 PLF	199 PLF	0 PLF	0 PLF	
3	Point	4-4-13		Far Face	90 lb	240 lb	0 lb	0 lb	J3
4	Point	5-5-13		Far Face	75 lb	161 lb	0 lb	0 lb	J3
	Self Weight				5 PLF				

Notes

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

Lumber

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

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 Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 24 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

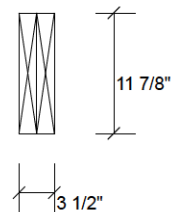
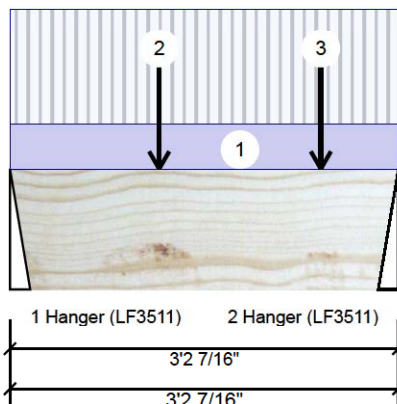
Project #: ZADORRA ESTATES

Level: Ground Floor

F8-C Forex 2.0E-3000Fb LVL 1.75C

-Py

MLP 23020

 PER:
 CHIEF BUILDING OFFICIAL


Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	254	112	0	0
2	Vertical	291	126	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	10%	140 / 381	521	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	11%	157 / 437	594	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	445 ft-lb	1'2 7/8"	34261 ft-lb	0.013 (1%)	1.25D+1.5L	L
Unbraced	445 ft-lb	1'2 7/8"	34261 ft-lb	0.013 (1%)	1.25D+1.5L	L
Shear	388 lb	2'9 1/16"	11596 lb	0.033 (3%)	1.25D+1.5L	L
Perm Defl in. (L/88091)	0.000	1'5 5/8"	0.100 (L/360)	0.004 (0%)	D	Uniform
LL Defl inch (L/37733)	0.001	1'5 5/16"	0.075 (L/480)	0.013 (1%)	L	L
TL Defl inch (L/26419)	0.001	1'5 7/16"	0.150 (L/240)	0.009 (1%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 7 Bottom must have sheathing attached or be continuously braced.
- 8 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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-2-7		Top	34 PLF	89 PLF	0 PLF	0 PLF	
2	Point	1-2-12		Far Face	55 lb	146 lb	0 lb	0 lb	J2
3	Point	2-6-12		Far Face	43 lb	114 lb	0 lb	0 lb	J2
	Self Weight				10 PLF				

Notes

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

Lumber

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

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 Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 25 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

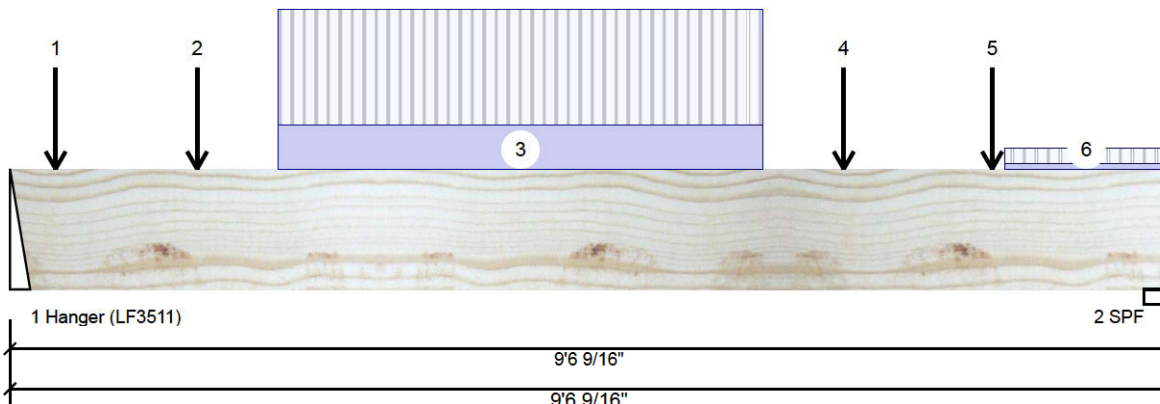
Project #: ZADORRA ESTATES

Level: Ground Floor

F9-C Forex 2.0E-3000Fb LVL 1.75C

-Py

MLIP 23020

PER:
CHIEF BUILDING OFFICIAL

Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	1002	421	0	0
2	Vertical	1006	423	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	39%	526 / 1503	2030	L	1.25D+1.5L
2 - SPF	2.375"	Vert	40%	528 / 1509	2037	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4756 ft-lb	4'10 5/16"	34261 ft-lb	0.139 (14%)	1.25D+1.5L	L
Unbraced	4756 ft-lb	4'10 5/16"	34261 ft-lb	0.139 (14%)	1.25D+1.5L	L
Shear	2028 lb	1'1 7/8"	11596 lb	0.175 (17%)	1.25D+1.5L	L
Perm Defl in.	0.019 (L/6028)	4'9 9/16"	0.310 (L/360)	0.060 (6%)	D	Uniform
LL Defl inch	0.044 (L/2521)	4'9 5/8"	0.233 (L/480)	0.190 (19%)	L	
TL Defl inch	0.063 (L/1777)	4'9 5/8"	0.465 (L/240)	0.135 (14%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 7 Bottom must have sheathing attached or be continuously braced.
- 8 Lateral slenderness ratio based on full section width.



June 23, 2022

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-4-8		Far Face	67 lb	178 lb	0 lb	0 lb	J4
2	Point	1-6-8		Far Face	99 lb	264 lb	0 lb	0 lb	J4
3	Part. Uniform	2-2-8 to 6-2-8		Far Face	79 PLF	211 PLF	0 PLF	0 PLF	
4	Point	6-10-8		Far Face	101 lb	270 lb	0 lb	0 lb	J4

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 26 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name:

PENROSE 3-EL 1

Project #:

ZADORRA ESTATES

F9-C Forex 2.0E-3000Fb LVL

1.75C

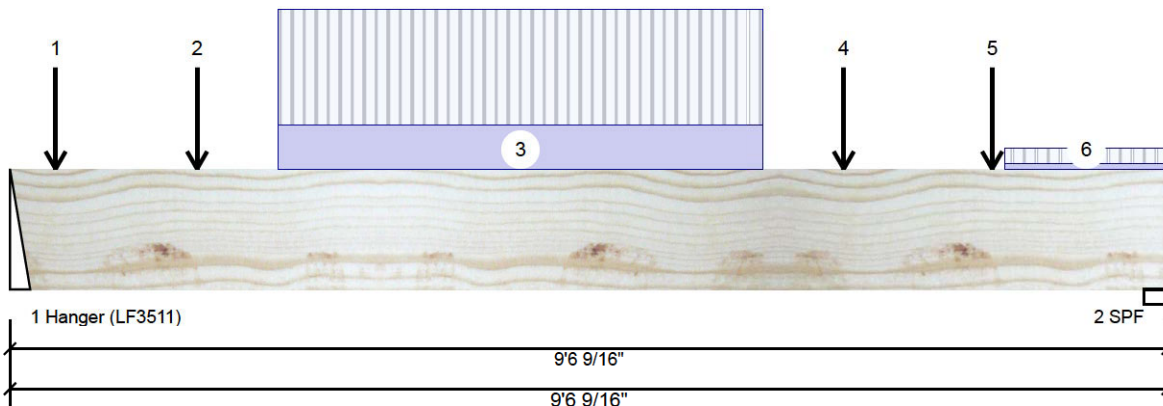
-Py

MLIP 23020
PASSED

Level: Ground Floor

PER:

CHIEF BUILDING OFFICIAL



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Point	8-1-3		Far Face	156 lb	416 lb	0 lb	0 lb	F2
6	Tie-In	8-2-7 to 9-6-9	0-8-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	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.

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400

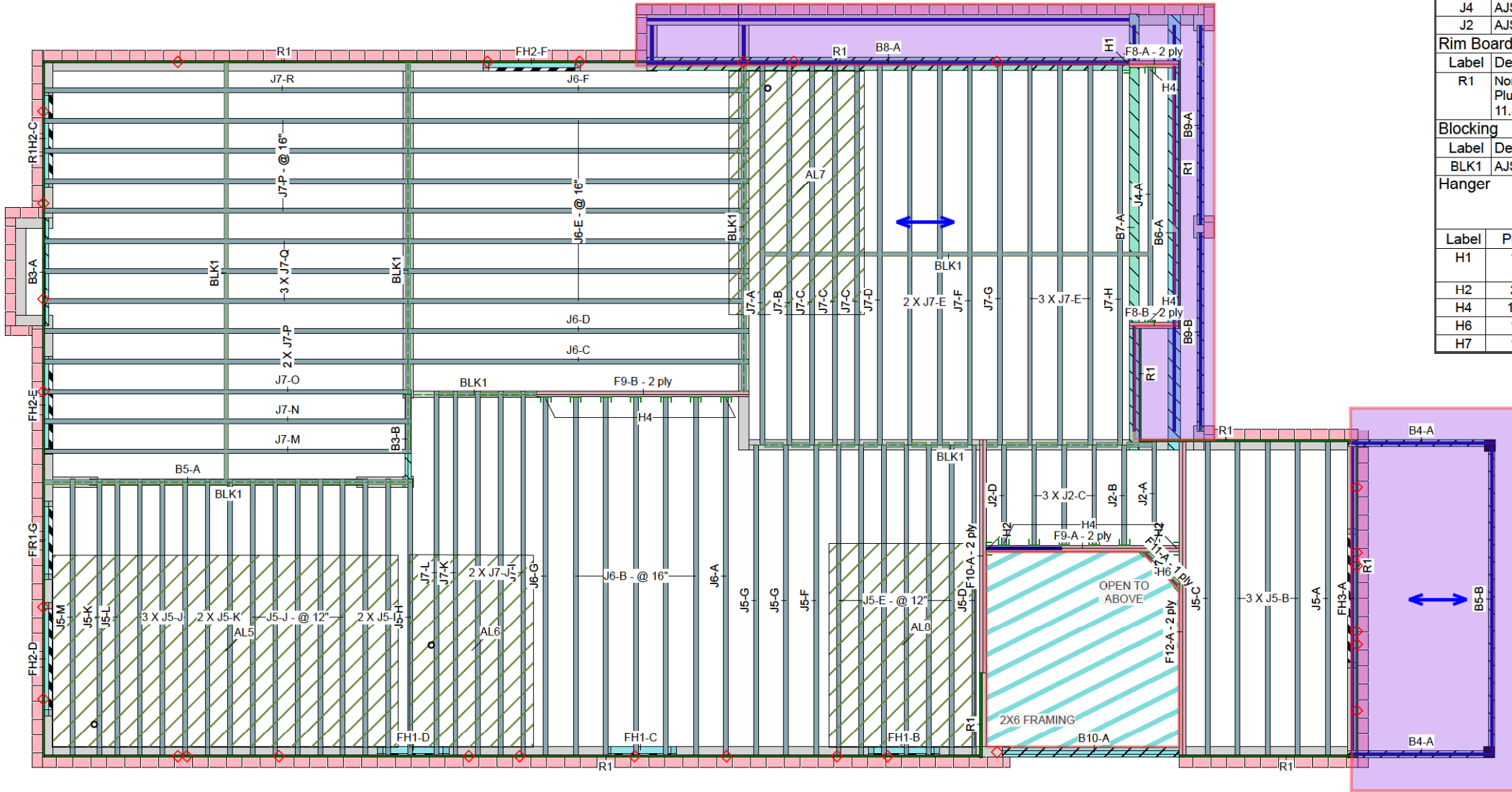


This design is valid until 5/24/2024

Second Floor



MHP 23020




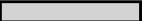






Second Floor LVL/LSL (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F12	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	16-0-0
F10	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	12-0-0
F9	Forex 2.0E-3000Fb LVL	1.75	11.875	2	2	4	10-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	11.875	2	2	4	4-0-0
F11	Forex 2.0E-3000Fb LVL	1.75	11.875			1	4-0-0

I Joist (Flush)							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J7	AJS 140	2.5	11.875			32	18-0-0
J6	AJS 140	2.5	11.875			17	16-0-0
J5	AJS 140	2.5	11.875			31	14-0-0
J4	AJS 140	2.5	11.875			1	12-0-0
J2	AJS 140	2.5	11.875			6	6-0-0

Rim Board							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			15	12-0-0

Blocking							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 140	2.5	11.875	LinFt		Varies	86-0-0

Hanger							
				Beam/Girder		Supported Member	
Label	Pcs	Description	Skew	Slope	fasteners	fasteners	
H1	1	Hanger by Others					
H2	2	LF3511			12 10d	2 #8x1 1/4WS	
H4	15	LF2511			12 10d	1 #8x1 1/4WS	
H6	1	SUR1.81/9 (Min)	Right		12 16d	2 10dx1 1/2	
H7	1	SUL1.81/9 (Min)	Left		12 16d	2 10dx1 1/2	

Legend	
PS	Point Load Support
	Load from Above
	Wall
	Wall Opening
	Norbord Rimboard Plus 1.125 X 11.875
	AJS 140 11.875
	Forex 2.0E-3000Fb LVL 1.75 X 11.875
	1.75 X 9.5 (Dropped)
	5 X 13.875 (Dropped)

JOB INFORMATION


Builder GREENPARK
Project ZADORRA ESTATES
Shipping PENROSE 3 EL 1 OSHAWA, ON
Sales Rep
Designer W C
Plotted June 01, 2022
Layout Name PENROSE 3-EL 1
Job Path C:\Users\wcdavid\Desktop\PENROSE 3-EL 1.isl

DESIGN CRITERIA

Second Floor	
Design Method	LSD (Canada)
Building Code	NBCC 2015 / OBC 2012

Floor Loads	
Live	40
Dead	15
Deflection Joist	
LL Span L/	480
TL Span L/	240
Deflection Flush Girder	
LL Span L/	480
TL Span L/	240
Deflection Dropped Girder	
LL Span L/	480
TL Span L/	240
Deflection Header	
LL Span L/	480
TL Span L/	240
Decking	
Decking	5/8" OSB

CCMC References

Boise - 12472-R , 12787-R	
LP - 12412-R	
Forex - 14056-R	
Kott Inc. 3228 Moodie Dr, Ottawa 14 Anderson Blvd, Uxbridge Ontario 613-838-2775 / 905-642-4400	

Hatch Area represents where additional load has been applied. (e.g. 5 psf for ceramic tile)

AJS140 I-Joists can be substituted with LP20 I-Joists for 9.5" and 11.875" depths shown on this layout.

1. All blocking to be cut from 12' joists
2. 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length
3. Ends of joists to be laterally supported
4. Packing of Steel beams and attachment by others
5. Shower and water closet flange locations are approximate only, consult architectural drawing for exact locations
6. Beams identified as "B" are dropped and supplied by others
7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls
8. Load transfer blocks to be installed under all point loads
9. Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
10. Hangers and Fasteners to be installed as per manufacturer
11. Framing shown on this layout may deviate from architectural drawings. Arch / Eng to review and approve the deviation prior to construction.
12. Multi ply beams with side loading to have all fasteners installed with the head on the side of the applied load



Client: GREENPARK

Date: 6/1/2022

Page 27 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #: ZADORRA ESTATES

Level: Second Floor

F10-A Forex 2.0E-3000Fb LVL

1.75

2-Ply

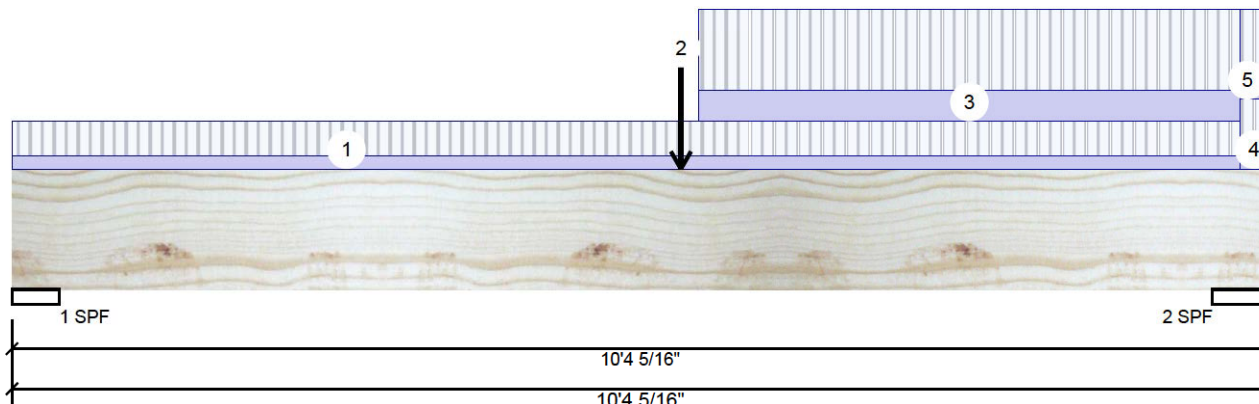
PASSED

PER:

CHIEF BUILDING OFFICIAL

TRUE COPY
OF PERMIT PLANS
Dec 06 2023

MILP 23020



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	346	199	0	0
2	Vertical	447	241	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.703"	Vert	8%	249 / 519	768	L	1.25D+1.5L
2 - SPF	5.500"	Vert	8%	301 / 670	971	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3567 ft-lb	5'6 3/16"	34261 ft-lb	0.104 (10%)	1.25D+1.5L	L
Unbraced	3567 ft-lb	5'6 3/16"	34261 ft-lb	0.104 (10%)	1.25D+1.5L	L
Shear	889 lb	8'10 15/16"	11596 lb	0.077 (8%)	1.25D+1.5L	L
Perm Defl in.	0.014 (L/8029)	5'6 1/16"	0.321 (L/360)	0.045 (4%)	D	Uniform
LL Defl inch	0.028 (L/4122)	5'6 3/16"	0.241 (L/480)	0.116 (12%)	L	
TL Defl inch	0.042 (L/2724)	5'6 3/16"	0.482 (L/240)	0.088 (9%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 6 Bottom must be laterally braced at a maximum of 5'6 3/16" o.c.
- 7 Lateral slenderness ratio based on full section width.



June 23, 2022

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-1-9	0-2-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	5-6-3		Near Face	277 lb	623 lb	0 lb	0 lb	F9
3	Tie-In	5-7-15 to 10-1-9	0-5-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	10-1-9 to 10-4-5	0-3-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	10-1-9 to 10-4-5	0-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				

Notes

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

Lumber

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

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 Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400





Client: GREENPARK

Date: 6/1/2022

Page 28 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #: ZADORRA ESTATES

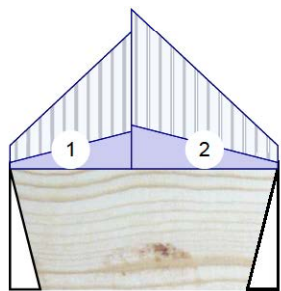
F11-A Forex 2.0E-3000Fb LVL

Dec 06 2023

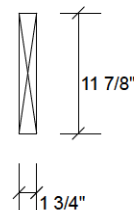
'5'

MILP 23020

Level: Second Floor

PER: CHIEF BUILDING OFFICIAL


1 Hanger (SUR/L1.81/9 (Min))
2 Hanger (SUR/L1.81/9 (Min))
2'2 1/2"
2'2 1/2"



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	17	12	0	0
2	Vertical	17	12	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	1%	14 / 25	40	L	1.25D+1.5L
2 - Hanger	3.000"	Vert	1%	14 / 25	40	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	19 ft-lb	1'1 3/16"	17130 ft-lb	0.001 (0%)	1.25D+1.5L	L
Unbraced	19 ft-lb	1'1 3/16"	17130 ft-lb	0.001 (0%)	1.25D+1.5L	L
Shear	4 lb	1'2 7/8"	3769 lb	0.001 (0%)	1.4D	Uniform
Perm Defl in. (L/625715)	0.000	1'1 3/16"	0.061 (L/360)	0.001 (0%)	D	Uniform
LL Defl inch (L/382055)	0.000	1'1 3/16"	0.046 (L/480)	0.001 (0%)	L	L
TL Defl inch (L/237214)	0.000	1'1 3/16"	0.092 (L/240)	0.001 (0%)	D+L	L



June 23, 2022

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top must be continuously laterally braced.
- 5 Bottom must be laterally braced at 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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-0-0	0-1-4 to 0-7-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	1-0-0 to 2-2-8	0-8-8 to 0-1-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

Notes

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

Lumber

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

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 Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400





Client: GREENPARK

Date: 6/1/2022

Page 29 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #: ZADORRA ESTATES

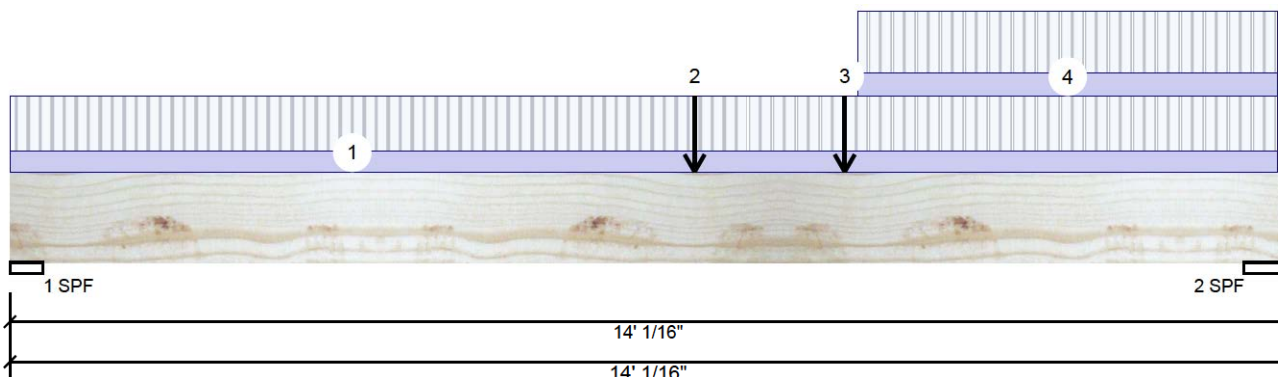
F12-A Forex 2.0E-3000Fb LVL

1.75

2-Ply

PASSED

Level: Second Floor

PER:
CHIEF BUILDING OFFICIAL

Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	318	203	0	0
2	Vertical	536	302	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.375"	Vert	8%	254 / 477	731	L	1.25D+1.5L
2 - SPF	5.500"	Vert	10%	377 / 804	1181	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4070 ft-lb	9'1 15/16"	34261 ft-lb	0.119 (12%)	1.25D+1.5L	L
Unbraced	4070 ft-lb	9'1 15/16"	34261 ft-lb	0.119 (12%)	1.25D+1.5L	L
Shear	1050 lb	12'6 11/16"	11596 lb	0.091 (9%)	1.25D+1.5L	L
Perm Defl in.	0.033 (L/4828)	7'4 15/16"	0.444 (L/360)	0.075 (7%)	D	Uniform
LL Defl inch	0.057 (L/2795)	7'6 3/16"	0.333 (L/480)	0.172 (17%)	L	L
TL Defl inch	0.090 (L/1770)	7'5 3/4"	0.665 (L/240)	0.136 (14%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 6 Bottom must be laterally braced at a maximum of 7'3 11/16" o.c.
- 7 Lateral slenderness ratio based on full section width.



June 23, 2022

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-10-15	0-6-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	7-6-3		Far Face	12 lb	17 lb	0 lb	0 lb	F11
3	Point	9-1-15		Far Face	200 lb	412 lb	0 lb	0 lb	F9
4	Tie-In	9-3-11 to 13-10-15	0-7-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				

Notes

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

Lumber

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

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 Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400

This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 30 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL 1
OSHAWA, ON

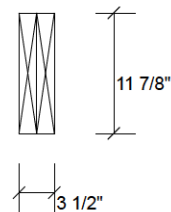
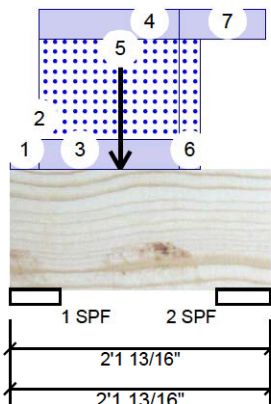
Job Name: PENROSE 3-EL 1

Project #: ZADORRA ESTATES

F8-A Forex 2.0E-3000Fb LVL 1.75C

-Ply - PASSED

Level: Second Floor

 PER:
 CHIEF BUILDING OFFICIAL


Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	156	214	206	0
2	Vertical	101	172	134	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.000"	Vert	7%	268 / 465	733	L	1.25D+1.5S +L
2 - SPF	5.375"	Vert	4%	215 / 303	518	L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	277 ft-lb	10 15/16"	34261 ft-lb	0.008 (1%)	1.25D+1.5L +S	L
Unbraced	277 ft-lb	10 15/16"	34261 ft-lb	0.008 (1%)	1.25D+1.5L +S	L
Shear	245 lb	1'4 7/8"	10552 lb	0.023 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/76967)	10 15/16"	0.047 (L/360)	0.005 (0%)	D	Uniform
LL Defl inch	0.000 (L/47566)	10 15/16"	0.035 (L/480)	0.010 (1%)	L+0.5S	L
TL Defl inch	0.001 (L/29398)	10 15/16"	0.070 (L/240)	0.008 (1%)	D+L+0.5S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 6 Bottom must have sheathing attached or be continuously braced.
- 7 Lateral slenderness ratio based on full section width.



June 23, 2022

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
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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, 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

This design is valid until 5/24/2024

Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400





Client: GREENPARK

Date: 6/1/2022

Page 31 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

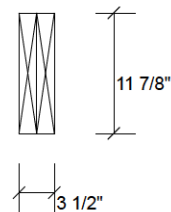
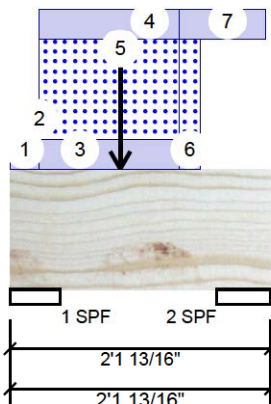
Project #: ZADORRA ESTATES

F8-A Forex 2.0E-3000Fb LVL 1.75C

Dec 06 2023

-Ply PASSED

Level: Second Floor

 PER:
 CHIEF BUILDING OFFICIAL


ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-2-15		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-2-14 to 0-2-15		Top	76 PLF	0 PLF	256 PLF	0 PLF	
3	Part. Uniform	0-2-15 to 1-4-12		Top	76 PLF	0 PLF	256 PLF	0 PLF	
4	Part. Uniform	0-2-15 to 1-4-12		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Point	0-10-15		Near Face	96 lb	257 lb	0 lb	0 lb	J4
6	Part. Uniform	1-4-12 to 1-6-13		Top	76 PLF	0 PLF	256 PLF	0 PLF	
7	Part. Uniform	1-4-12 to 2-1-5		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				10 PLF				



June 23, 2022

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

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 Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 32 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #:

ZADORRA ESTATES

F8-B Forex 2.0E-3000Fb LVL

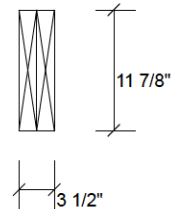
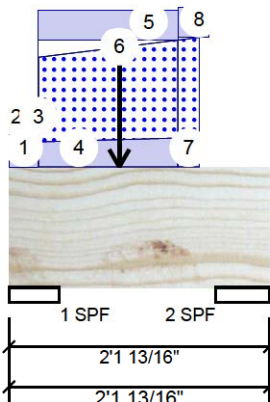
1.75C

-Ply

MLIP 23020
Level: Second Floor

PER:

CHIEF BUILDING OFFICIAL



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	158	226	187	0
2	Vertical	102	134	128	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.000"	Vert	7%	283 / 438	721	L	1.25D+1.5S +L
2 - SPF	5.375"	Vert	4%	168 / 294	462	L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	274 ft-lb	10 15/16"	34261 ft-lb	0.008 (1%)	1.25D+1.5L +S	L
Unbraced	274 ft-lb	10 15/16"	34261 ft-lb	0.008 (1%)	1.25D+1.5L +S	L
Shear	251 lb	1'4 7/8"	10784 lb	0.023 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/77874)	10 15/16"	0.047 (L/360)	0.005 (0%)	D	Uniform
LL Defl inch	0.000 (L/47970)	10 15/16"	0.035 (L/480)	0.010 (1%)	L+0.5S	L
TL Defl inch	0.001 (L/29685)	10 15/16"	0.070 (L/240)	0.008 (1%)	D+L+0.5S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 6 Bottom must have sheathing attached or be continuously braced.
- 7 Lateral slenderness ratio based on full section width.



June 23, 2022

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, 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 Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 33 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #:

ZADORRA ESTATES

F8-B Forex 2.0E-3000Fb LVL

1.75C

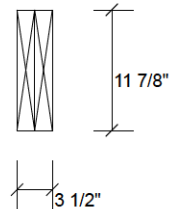
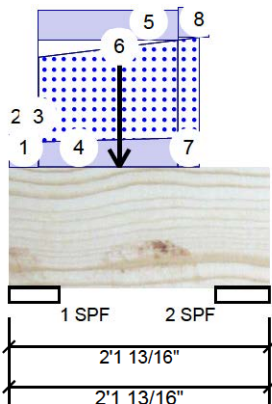
-Py

MLIP 23020
PASSED

Level: Second Floor

PER:

CHIEF BUILDING OFFICIAL



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-2-15		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 0-2-10		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Tapered Start	0-2-14		Top	64 PLF	0 PLF	217 PLF	0 PLF	
	End	0-2-15			64 PLF	0 PLF	217 PLF	0 PLF	
4	Tapered Start	0-2-15		Top	64 PLF	0 PLF	217 PLF	0 PLF	
	End	1-4-12			74 PLF	0 PLF	251 PLF	0 PLF	
5	Part. Uniform	0-2-15 to 1-4-12		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Point	0-10-15		Far Face	98 lb	260 lb	0 lb	0 lb	J4
7	Tapered Start	1-4-12		Top	74 PLF	0 PLF	251 PLF	0 PLF	
	End	1-6-13			76 PLF	0 PLF	256 PLF	0 PLF	
8	Part. Uniform	1-4-12 to 1-7-13		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				10 PLF				



June 23, 2022

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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

Manufacturer Info

Forex
APA: PR-L318

Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 34 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1

Job Name: PENROSE 3-EL 1

OSHAWA, ON

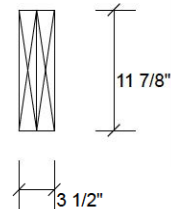
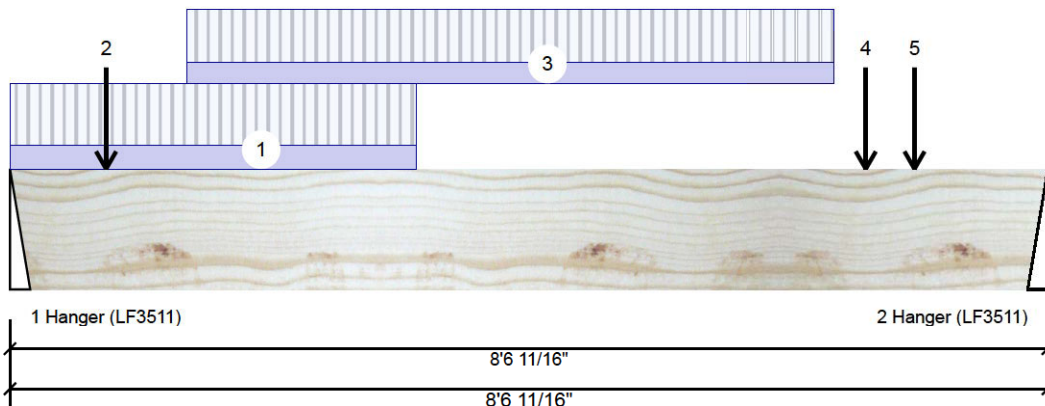
Project #: ZADORRA ESTATES

Dec 06 2023

Level: Second Floor

F9-A Forex 2.0E-3000Fb LVL 1.75C

-Ply - PASSED

 PER:
 CHIEF BUILDING OFFICIAL


Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	623	277	0	0
2	Vertical	412	200	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	25%	347 / 935	1282	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	17%	251 / 618	868	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2180 ft-lb	3'7 13/16"	34261 ft-lb	0.064 (6%)	1.25D+1.5L	L
Unbraced	2180 ft-lb	3'7 13/16"	34261 ft-lb	0.064 (6%)	1.25D+1.5L	L
Shear	1051 lb	1'1 7/8"	11596 lb	0.091 (9%)	1.25D+1.5L	L
Perm Defl in. (L/13261)	0.008	4'1 11/16"	0.278 (L/360)	0.027 (3%)	D	Uniform
LL Defl inch	0.016 (L/6094)	4'1 3/16"	0.209 (L/480)	0.079 (8%)	L	L
TL Defl inch	0.024 (L/4176)	4'1 3/8"	0.418 (L/240)	0.057 (6%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 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 must be continuously laterally braced.
- 7 Bottom must have sheathing attached or be continuously braced.
- 8 Lateral slenderness ratio based on full section width.



June 23, 2022

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-4-3		Top	38 PLF	100 PLF	0 PLF	0 PLF	
2	Point	0-9-8		Far Face	38 lb	100 lb	0 lb	0 lb	J2
3	Part. Uniform	1-5-8 to 6-9-8		Far Face	33 PLF	88 PLF	0 PLF	0 PLF	
4	Point	7-0-11		Near Face	12 lb	17 lb	0 lb	0 lb	F11

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

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 Inc.

3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 5/24/2024



Client: GREENPARK

Date: 6/1/2022

Page 35 of 36

Project:

CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address:

PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #:

ZADORRA ESTATES

F9-A Forex 2.0E-3000Fb LVL

1.75C

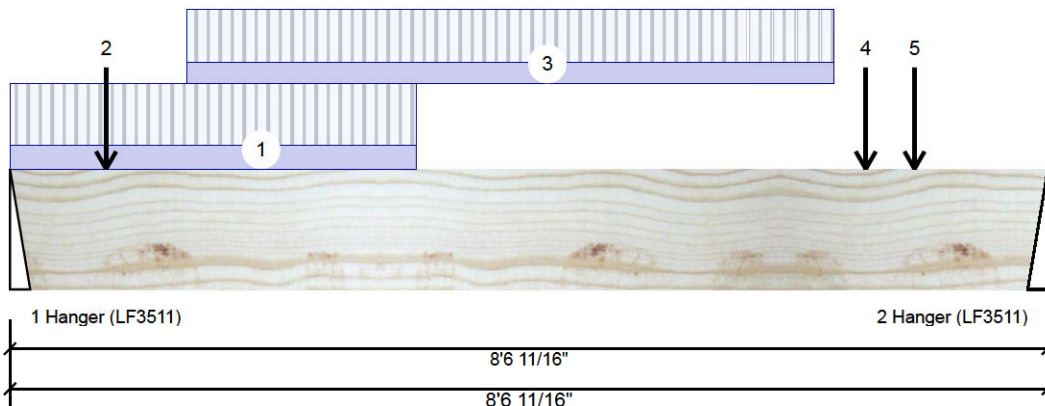
-Ply

MLIP 23020

Level: Second Floor

PER:

CHIEF BUILDING OFFICIAL



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Point	7-5-8		Far Face	43 lb	114 lb	0 lb	0 lb	J2
	Self Weight				10 PLF				



June 23, 2022

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Lumber

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chemicals**Handling & Installation**

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Client: GREENPARK

Date: 6/1/2022

Page 36 of 36

Project: CORPORATION OF THE CITY OF OSHAWA

Input by: W C

Address: PENROSE 3-EL 1
OSHAWA, ON

Job Name: PENROSE 3-EL 1

Project #: ZADORRA ESTATES

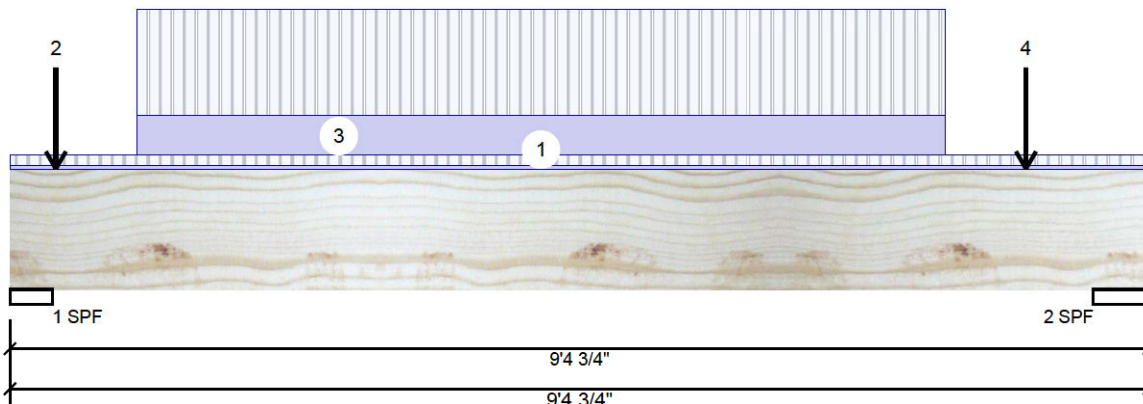
Level: Second Floor

F9-B Forex 2.0E-3000Fb LVL 1.75C

-Py

PER:

CHIEF BUILDING OFFICIAL



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	1637	659	0	0
2	Vertical	1524	617	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.188"	Vert	36%	823 / 2455	3279	L	1.25D+1.5L
2 - SPF	5.500"	Vert	26%	772 / 2286	3057	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6470 ft-lb	4'7 15/16"	34261 ft-lb	0.189 (19%)	1.25D+1.5L	L
Unbraced	6470 ft-lb	4'7 15/16"	34261 ft-lb	0.189 (19%)	1.25D+1.5L	L
Shear	3112 lb	7'11 3/8"	11596 lb	0.268 (27%)	1.25D+1.5L	L
Perm Defl in.	0.022 (L/4793)	4'7 13/16"	0.290 (L/360)	0.075 (8%)	D	Uniform
LL Defl inch	0.054 (L/1935)	4'7 7/8"	0.218 (L/480)	0.248 (25%)	L	
TL Defl inch	0.076 (L/1378)	4'7 13/16"	0.436 (L/240)	0.174 (17%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
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- 5 Top must be continuously laterally braced.
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 9-4-12	0-8-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-4-9		Near Face	137 lb	366 lb	0 lb	0 lb	J6
3	Part. Uniform	1-0-9 to 7-8-9		Near Face	118 PLF	314 PLF	0 PLF	0 PLF	
4	Point	8-4-9		Near Face	161 lb	430 lb	0 lb	0 lb	J6
	Self Weight				10 PLF				

Notes

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chemicals

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