



Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

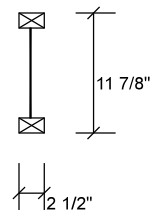
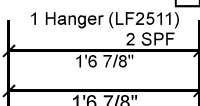
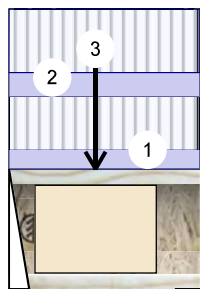
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F2-A AJS 140 11.875" -



MHP 23039

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	147	56	0	0
2	Vertical	146	55	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	18%	70 / 221	291	L	1.25D+1.5L
2 - SPF	2.375"	Vert	17%	69 / 219	288	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	106 ft-lb	8 9/16"	5305 ft-lb	0.020 (2%)	1.25D+1.5L	L
Unbraced	106 ft-lb	8 9/16"	5305 ft-lb	0.020 (2%)	1.25D+1.5L	L
Shear	261 lb	1 1/4"	2350 lb	0.111 (11%)	1.25D+1.5L	L
Perm Defl in. (L/50914)	0.000	8 9/16"	0.044 (L/360)	0.007 (1%)	D	Uniform
LL Defl inch (L/19288)	0.001	8 9/16"	0.044 (L/360)	0.019 (2%)	L	L
TL Defl inch (L/13988)	0.001	8 9/16"	0.067 (L/240)	0.017 (2%)	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.
- Fill all hanger nailing holes.
- Girders are designed to be supported on the bottom edge only.
- If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-6-14	1-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-6-14	1-11-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-8-9		Near Face	25 lb	65 lb	0 lb	0 lb	J1

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

This design is valid until 11/3/2024

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



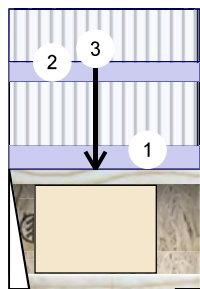


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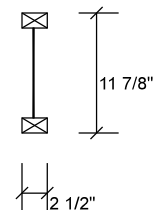
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F2-B AJS 140 11.875" - PASSED **MHP 23039**



1 Hanger (LF2511)
2 SPF
1'6 7/8"
1'6 7/8"



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	147	55	0	0
2	Vertical	146	55	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	18%	69 / 221	290	L	1.25D+1.5L
2 - SPF	2.375"	Vert	17%	68 / 219	288	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	105 ft-lb	8 9/16"	5305 ft-lb	0.020 (2%)	1.25D+1.5L	L
Unbraced	105 ft-lb	8 9/16"	5305 ft-lb	0.020 (2%)	1.25D+1.5L	L
Shear	260 lb	1 1/4"	2350 lb	0.111 (11%)	1.25D+1.5L	L
Perm Defl in. (L/51788)	0.000	8 9/16"	0.044 (L/360)	0.007 (1%)	D	Uniform
LL Defl inch (L/19302)	0.001	8 9/16"	0.044 (L/360)	0.019 (2%)	L	L
TL Defl inch (L/14061)	0.001	8 9/16"	0.067 (L/240)	0.017 (2%)	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.
- Fill all hanger nailing holes.
- Girders are designed to be supported on the bottom edge only.
- If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-6-14	1-11-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-6-14	1-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-8-9		Far Face	24 lb	65 lb	0 lb	0 lb	J1

Notes

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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

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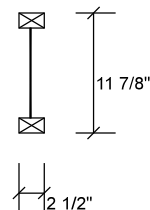
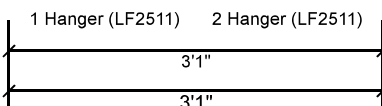
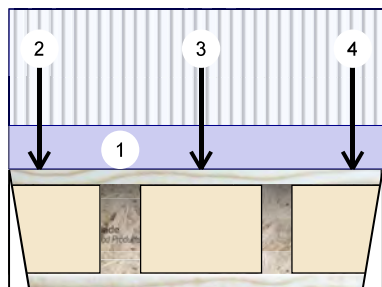
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F3-A AJS 140 11.875" -



MHP 23039

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	405	152	0	0
2	Vertical	405	152	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	50%	190 / 607	797	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	50%	190 / 608	798	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	565 ft-lb	1'7"	5305 ft-lb	0.106 (11%)	1.25D+1.5L	L
Unbraced	565 ft-lb	1'7"	5305 ft-lb	0.106 (11%)	1.25D+1.5L	L
Shear	791 lb	2'11 3/4"	2350 lb	0.337 (34%)	1.25D+1.5L	L
Perm Defl in. (L/17194)	0.002	1'7"	0.096 (L/360)	0.021 (2%)	D	Uniform
LL Defl inch	0.005 (L/6438)	1'7"	0.096 (L/360)	0.056 (6%)	L	L
TL Defl inch	0.007 (L/4684)	1'7"	0.144 (L/240)	0.051 (5%)	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.
- Fill all hanger nailing holes.
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-1-0	0-10-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-3-0		Far Face	76 lb	202 lb	0 lb	0 lb	J4
3	Point	1-7-0		Far Face	116 lb	310 lb	0 lb	0 lb	J4
4	Point	2-10-0		Far Face	72 lb	192 lb	0 lb	0 lb	J4

Notes

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Lumber

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

chemicals

Handling & Installation

- Ljoist flanges must not be cut or drilled
- Refer to latest copy of the Ljoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
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- Provide lateral support at bearing points to avoid lateral displacement and rotation
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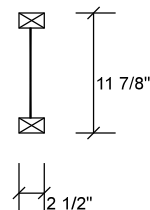
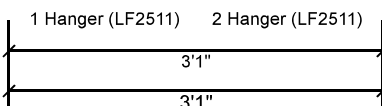
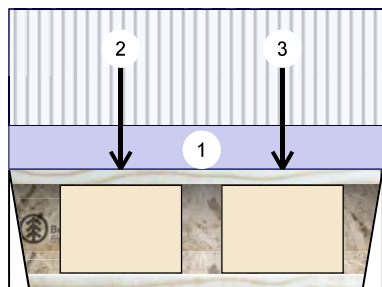
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F3-B AJS 140 11.875" -



MHP 23039

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	382	147	0	0
2	Vertical	398	154	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	47%	184 / 574	758	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	49%	192 / 597	789	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	592 ft-lb	1'1 3/8"	5305 ft-lb	0.112 (11%)	1.25D+1.5L	L
Unbraced	592 ft-lb	1'1 3/8"	5305 ft-lb	0.112 (11%)	1.25D+1.5L	L
Shear	782 lb	2'11 3/4"	2350 lb	0.333 (33%)	1.25D+1.5L	L
Perm Defl in. (L/15337)	0.002	1'5 5/16"	0.096 (L/360)	0.023 (2%)	D	Uniform
LL Defl inch	0.006 (L/5916)	1'5 5/16"	0.096 (L/360)	0.061 (6%)	L	L
TL Defl inch	0.008 (L/4269)	1'5 5/16"	0.144 (L/240)	0.056 (6%)	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.
- Fill all hanger nailing holes.
- Girders are designed to be supported on the bottom edge only.
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- If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-1-0	0-10-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-11-1		Far Face	133 lb	344 lb	0 lb	0 lb	J4
3	Point	2-3-1		Far Face	128 lb	330 lb	0 lb	0 lb	J4

Notes

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Lumber

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

This design is valid until 11/3/2024

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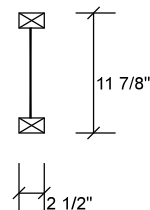
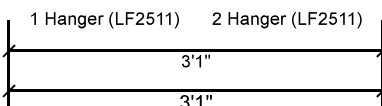
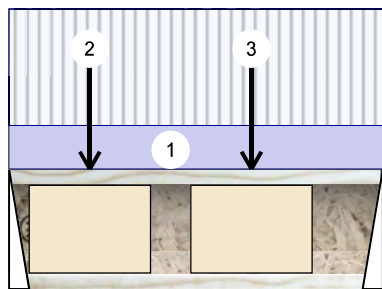


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F3-C AJS 140 11.875" - **PASSED** MHP 23039



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	342	128	0	0
2	Vertical	288	108	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	42%	160 / 513	673	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	35%	135 / 431	566	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	515 ft-lb	2'	5305 ft-lb	0.097 (10%)	1.25D+1.5L	L
Unbraced	515 ft-lb	2'	5305 ft-lb	0.097 (10%)	1.25D+1.5L	L
Shear	665 lb	1 1/4"	2350 lb	0.283 (28%)	1.25D+1.5L	L
Perm Defl in. (L/18822)	0.002	1'11 5/16"	0.096 (L/360)	0.019 (2%)	D	Uniform
LL Defl inch	0.005 (L/7060)	1'11 5/16"	0.096 (L/360)	0.051 (5%)	L	L
TL Defl inch	0.007 (L/5134)	1'11 5/16"	0.144 (L/240)	0.047 (5%)	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.
- Fill all hanger nailing holes.
- Girders are designed to be supported on the bottom edge only.
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JULY 21, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-1-0	0-10-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-8-0		Near Face	89 lb	238 lb	0 lb	0 lb	J3
3	Point	2-0-0		Near Face	107 lb	285 lb	0 lb	0 lb	J3

Notes

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Lumber

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

Handling & Installation

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- Provide lateral support at bearing points to avoid lateral displacement and rotation
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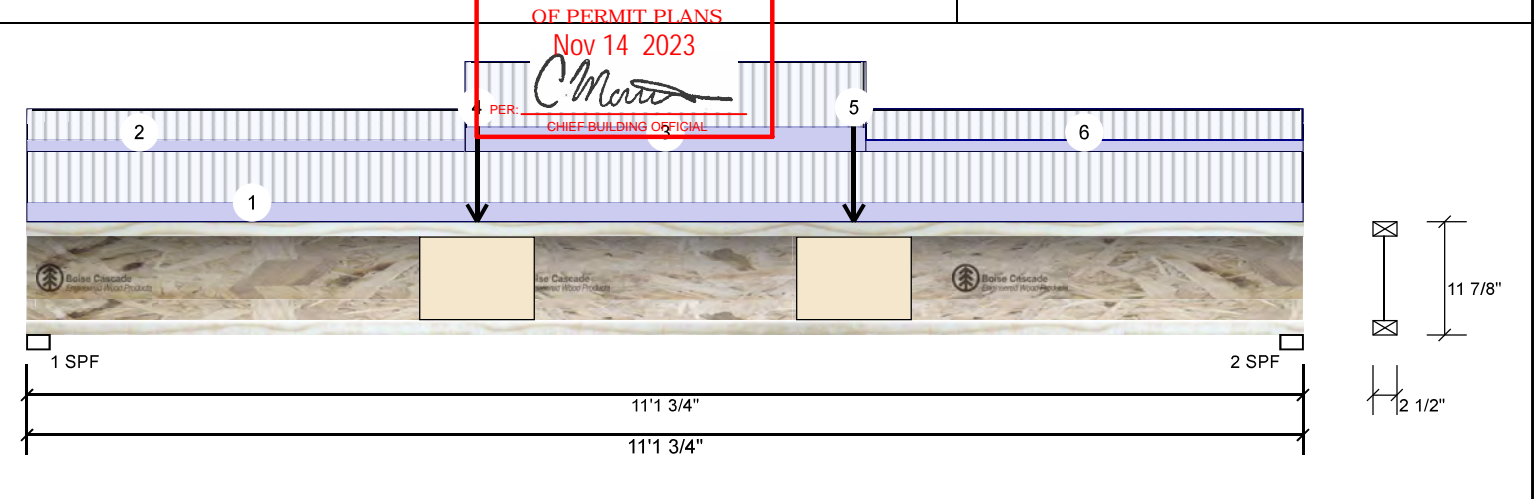


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Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	420	158	0	0
2	Vertical	420	158	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	49%	198 / 630	828	L	1.25D+1.5L
2 - SPF	2.375"	Vert	49%	197 / 631	828	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2645 ft-lb	5'6 13/16"	5305 ft-lb	0.499 (50%)	1.25D+1.5L	L
Unbraced	2645 ft-lb	5'6 13/16"	5305 ft-lb	0.499 (50%)	1.25D+1.5L	L
Shear	816 lb	11' 1/8"	2350 lb	0.347 (35%)	1.25D+1.5L	L
Perm Defl in.	0.042 (L/3134)	5'6 7/8"	0.362 (L/360)	0.115 (11%)	D	Uniform
LL Defl inch	0.111 (L/1178)	5'6 7/8"	0.362 (L/360)	0.305 (31%)	L	
TL Defl inch	0.152 (L/856)	5'6 7/8"	0.544 (L/240)	0.280 (28%)	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 3'11 3/16" o.c.



READ ALL NOTES ON THIS PAGE AND ON THE
ENGINEERING NOTES: EWP-FLOORS. THE NOTE
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 11-1-12	0-8-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 3-9-15	0-4-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	3-9-15 to 7-3-15	0-10-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	3-11-3		Near Face	56 lb	147 lb	0 lb	0 lb	F2
5	Point	7-2-11		Near Face	55 lb	147 lb	0 lb	0 lb	F2
6	Tie-In	7-3-15 to 11-1-12	0-4-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

This design is valid until 11/3/2024

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
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

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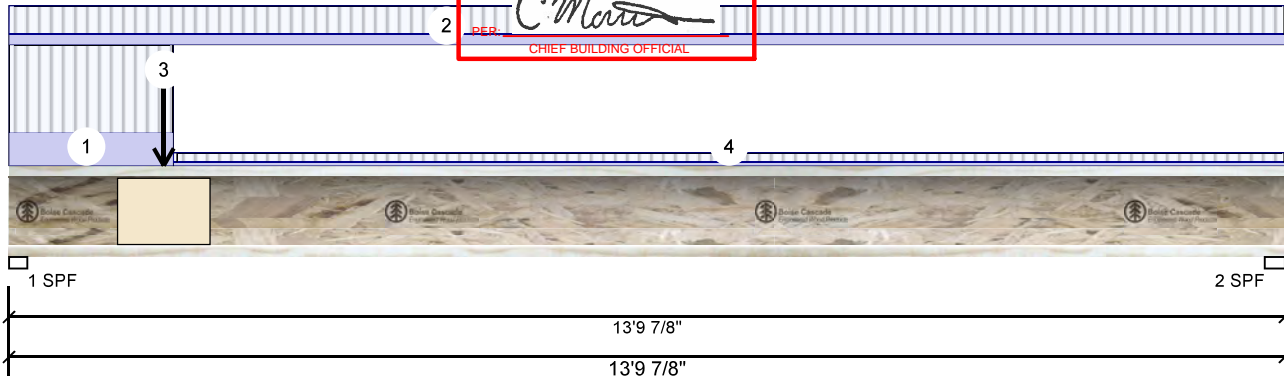
F5-A AJS 140

11.875" -

APPROVED BY THE CITY OF OSHAWA
TRUE COPY
OF PERMIT PLANS
Nov 14 2023
PER: *C. Martin*
CHIEF BUILDING OFFICIAL

MHP 23039

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	653	245	0	0
2	Vertical	248	93	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	76%	306 / 980	1286	L	1.25D+1.5L
2 - SPF	2.625"	Vert	28%	116 / 372	489	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2064 ft-lb	5' 3/4"	5305 ft-lb	0.389 (39%)	1.25D+1.5L	L
Unbraced	2064 ft-lb	5' 3/4"	5305 ft-lb	0.389 (39%)	1.25D+1.5L	L
Shear	1263 lb	1 5/8"	2350 lb	0.537 (54%)	1.25D+1.5L	L
Perm Defl in.	0.048 (L/3383)	6'5 1/8"	0.451 (L/360)	0.106 (11%)	D	Uniform
LL Defl inch	0.128 (L/1269)	6'5 1/8"	0.451 (L/360)	0.284 (28%)	L	
TL Defl inch	0.176 (L/923)	6'5 1/8"	0.677 (L/240)	0.260 (26%)	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.
- 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 12'1 3/4" o.c.



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-9-6	1-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 13-9-14	0-6-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-2		Far Face	152 lb	405 lb	0 lb	0 lb	F3
4	Tie-In	1-9-6 to 13-9-14	0-2-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

This design is valid until 11/3/2024

Manufacturer Info

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Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12787

Kott Inc.

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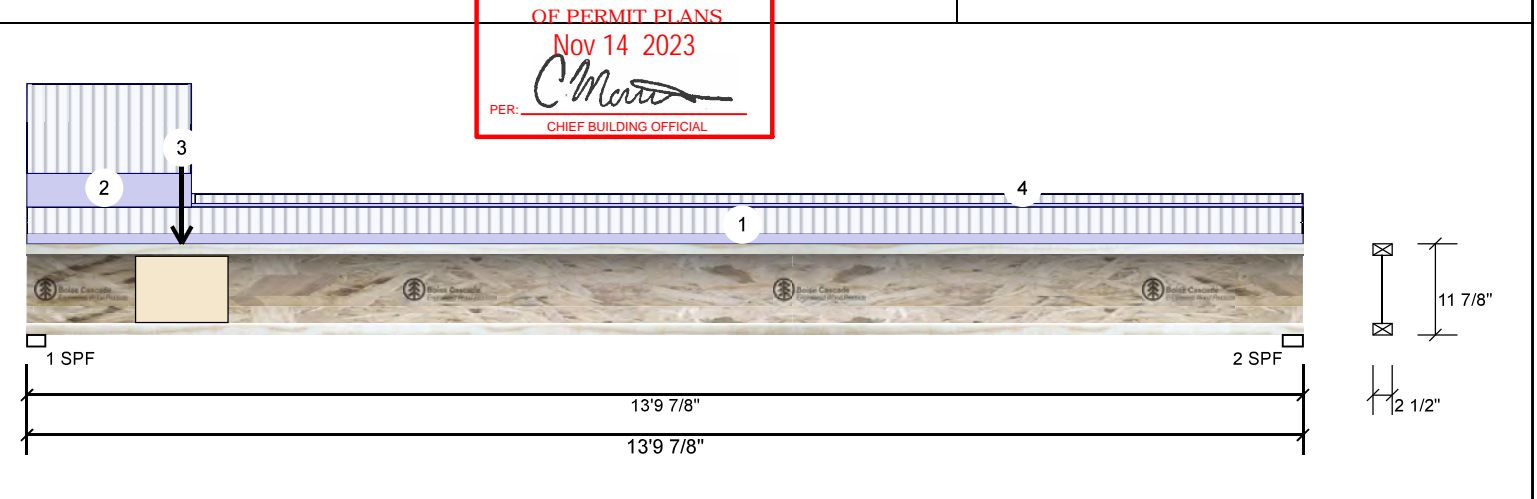


Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

Page 8 of 29

F5-B AJS 140 11.875" - PASSED **MHP 23039**



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	642	241	0	0
2	Vertical	237	89	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	75%	301 / 962	1263	L	1.25D+1.5L
2 - SPF	2.625"	Vert	27%	111 / 355	466	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1995 ft-lb	4'11 3/8"	5305 ft-lb	0.376 (38%)	1.25D+1.5L	L
Unbraced	1995 ft-lb	4'11 3/8"	5305 ft-lb	0.376 (38%)	1.25D+1.5L	L
Shear	1241 lb	1 5/8"	2350 lb	0.528 (53%)	1.25D+1.5L	L
Perm Defl in.	0.046 (L/3508)	6'4 15/16"	0.451 (L/360)	0.103 (10%)	D	Uniform
LL Defl inch	0.123 (L/1316)	6'4 15/16"	0.451 (L/360)	0.274 (27%)	L	
TL Defl inch	0.170 (L/957)	6'4 15/16"	0.677 (L/240)	0.251 (25%)	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.
- 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 12'1 3/4" o.c.



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-9-14	0-5-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-6	1-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-2		Near Face	152 lb	405 lb	0 lb	0 lb	F3
4	Tie-In	1-9-6 to 13-9-14	0-2-2	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
- Ljoist not to be treated with fire retardant or corrosive chemicals

Handling & Installation

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

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

Manufacturer Info

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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 11/3/2024



Client: GREENPARK
Project:
Address: ZADORRA ESTATES
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Date: 7/18/2023
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Job Name: VILLA 12-1
Project #:

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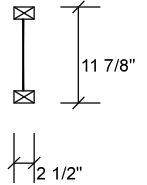
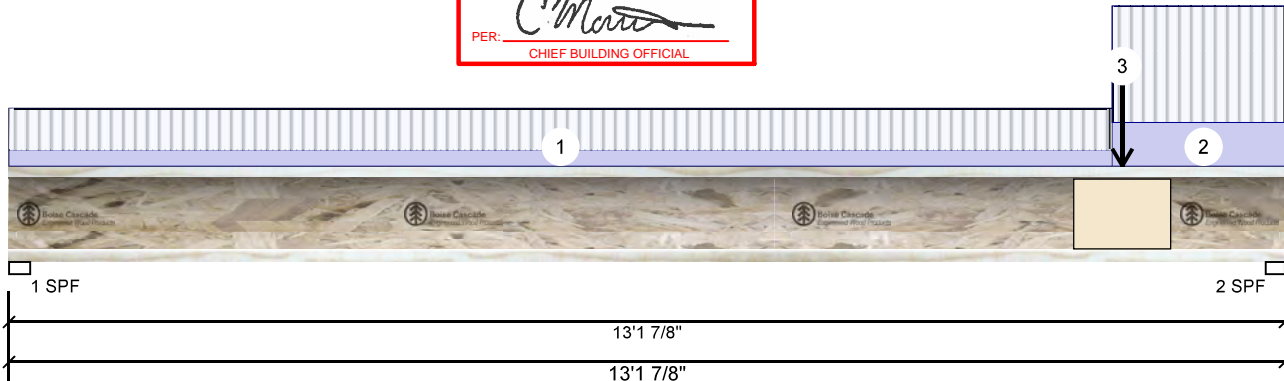
F5-C AJS 140

11.875" -



MHP 23039

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	195	73	0	0
2	Vertical	480	180	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.625"	Vert	22%	92 / 293	385	L	1.25D+1.5L
2 - SPF	2.375"	Vert	56%	225 / 720	945	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1524 ft-lb	8'2 3/4"	5305 ft-lb	0.287 (29%)	1.25D+1.5L	L
Unbraced	1524 ft-lb	8'2 3/4"	5305 ft-lb	0.287 (29%)	1.25D+1.5L	L
Shear	928 lb	13' 1/4"	2350 lb	0.395 (39%)	1.25D+1.5L	L
Perm Defl in.	0.032 (L/4755)	7' 5/16"	0.429 (L/360)	0.076 (8%)	D	Uniform
LL Defl inch	0.087 (L/1783)	7' 5/16"	0.429 (L/360)	0.202 (20%)	L	
TL Defl inch	0.119 (L/1297)	7' 5/16"	0.643 (L/240)	0.185 (19%)	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.
- 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 11'5 3/4" o.c.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0 to 11-4-8	0-7-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	11-4-8 to 13-1-14	1-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	11-5-12		Far Face	108 lb	288 lb	0 lb	0 lb	F3

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

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CCMC: 12787

Kott Inc.

3228 Moodie Dr, Ottawa, Ontario
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This design is valid until 11/3/2024

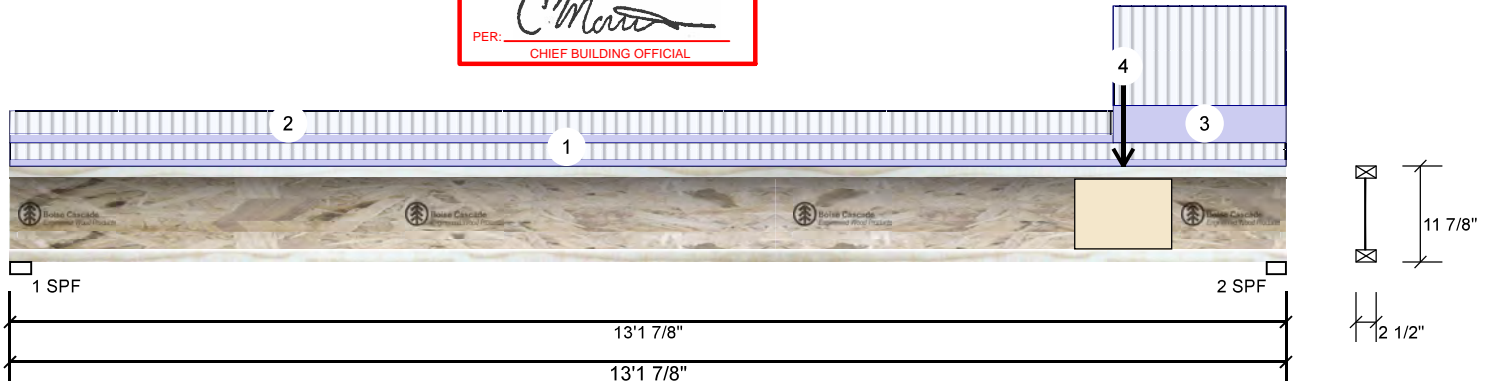


Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

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F5-D AJS 140 11.875" - PASSED MHP 23039



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	222	83	0	0
2	Vertical	561	210	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.625"	Vert	25%	104 / 333	437	L	1.25D+1.5L
2 - SPF	2.375"	Vert	66%	263 / 841	1104	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1751 ft-lb	8'3 7/8"	5305 ft-lb	0.330 (33%)	1.25D+1.5L	L
Unbraced	1751 ft-lb	8'3 7/8"	5305 ft-lb	0.330 (33%)	1.25D+1.5L	L
Shear	1083 lb	13' 1/4"	2350 lb	0.461 (46%)	1.25D+1.5L	L
Perm Defl in.	0.037 (L/4147)	7' 1/2"	0.429 (L/360)	0.087 (9%)	D	Uniform
LL Defl inch	0.099 (L/1554)	7' 1/2"	0.429 (L/360)	0.232 (23%)	L	
TL Defl inch	0.137 (L/1130)	7' 1/2"	0.643 (L/240)	0.212 (21%)	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.
- 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 11'5 3/4" o.c.



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-1-14	0-3-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 11-4-8	0-4-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	11-4-8 to 13-1-14	1-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	11-5-12		Near Face	128 lb	342 lb	0 lb	0 lb	F3

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

This design is valid until 11/3/2024

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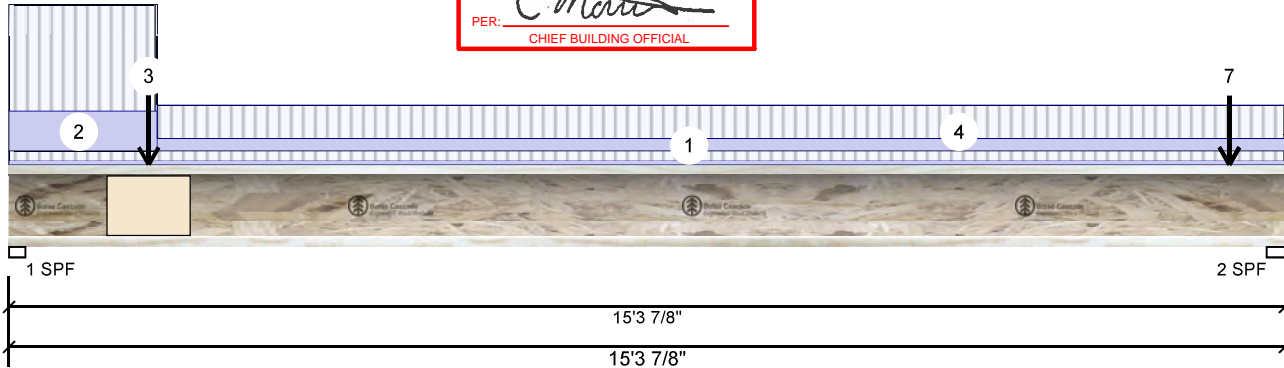
Page 11 of 29

F6-A AJS 140 11.875" -



MHP 23039

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	636	244	0	0
2	Vertical	612	287	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	75%	305 / 955	1260	L	1.25D+1.5L
2 - SPF	2.625"	Vert	74%	359 / 918	1277	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2368 ft-lb	6'6 5/8"	5305 ft-lb	0.446 (45%)	1.25D+1.5L	L
Unbraced	2368 ft-lb	6'6 5/8"	5305 ft-lb	0.446 (45%)	1.25D+1.5L	L
Shear	1269 lb	15'2"	2350 lb	0.540 (54%)	1.25D+1.5L	L
Perm Defl in.	0.071 (L/2538)	7'5 1/8"	0.501 (L/360)	0.142 (14%)	D	Uniform
LL Defl inch	0.181 (L/995)	7'4 7/16"	0.501 (L/360)	0.362 (36%)	L	
TL Defl inch	0.252 (L/715)	7'4 5/8"	0.752 (L/240)	0.336 (34%)	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.
- 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 13'7 3/4" o.c.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 15-3-14	0-1-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-9-6	1-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-2		Near Face	147 lb	382 lb	0 lb	0 lb	F3
4	Tie-In	1-9-6 to 15-3-14	0-6-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	14-7-14		Top	72 lb	193 lb	0 lb	0 lb	J5
	Bearing Length	0-1-8							
6	Point	14-7-14		Top	76 lb	184 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

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

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

This design is valid until 11/3/2024

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
 Project:
 Address: ZADORRA ESTATES
 OSHAWA, ON.

Date: 7/18/2023
 Input by: RCO
 Job Name: VILLA 12-1
 Project #:

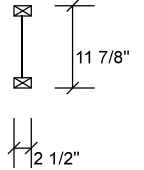
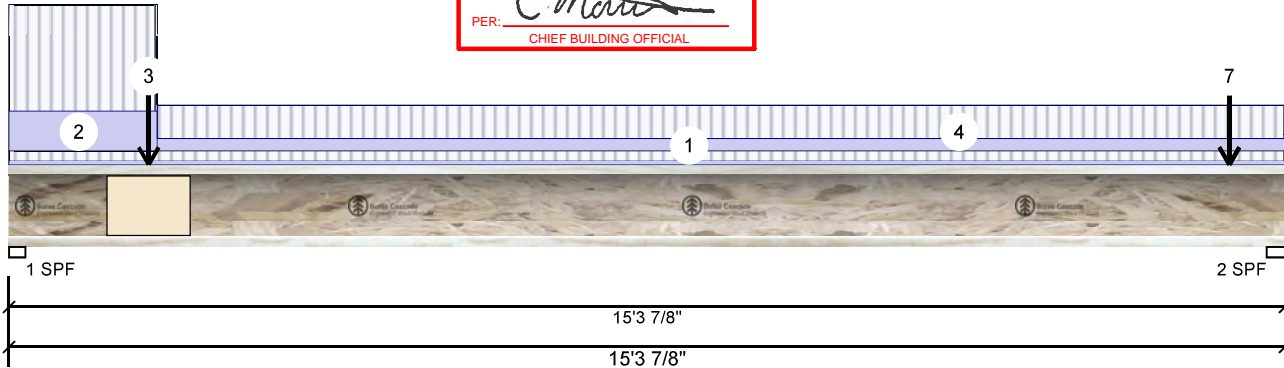
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F6-A AJS 140 11.875" -



MHP 23039

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Bearing Length	0-1-8							
	Point	14-7-14		Top	53 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-1-8							



JULY 21, 2023

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Notes

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

Lumber

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

chemicals

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 11/3/2024

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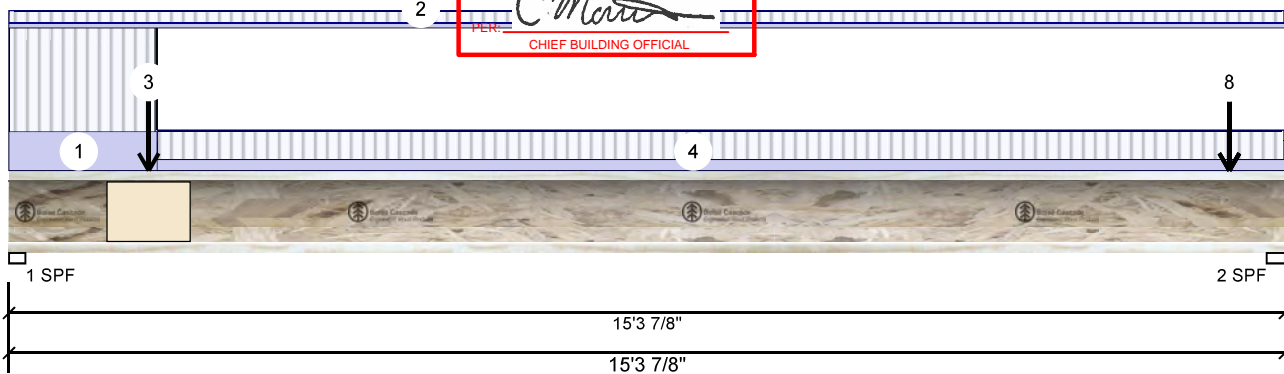


Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

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F6-B AJS 140 11.875" - PASSED MHP 23039



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	652	251	0	0
2	Vertical	557	278	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	77%	314 / 978	1292	L	1.25D+1.5L
2 - SPF	2.625"	Vert	68%	347 / 835	1182	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2378 ft-lb	6'4 15/16"	5305 ft-lb	0.448 (45%)	1.25D+1.5L	L
Unbraced	2378 ft-lb	6'4 15/16"	5305 ft-lb	0.448 (45%)	1.25D+1.5L	L
Shear	1272 lb	1 5/8"	2350 lb	0.541 (54%)	1.25D+1.5L	L
Perm Defl in.	0.072 (L/2519)	7'4 3/4"	0.501 (L/360)	0.143 (14%)	D	Uniform
LL Defl inch	0.181 (L/996)	7'4 1/16"	0.501 (L/360)	0.361 (36%)	L	
TL Defl inch	0.253 (L/714)	7'4 1/4"	0.752 (L/240)	0.336 (34%)	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 13'7 3/4" o.c.



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-9-6	1-7-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 15-3-14	0-2-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-8-2		Far Face	154 lb	398 lb	0 lb	0 lb	F3
4	Tie-In	1-9-6 to 15-3-14	0-5-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	14-7-14		Top	58 lb	155 lb	0 lb	0 lb	J5
	Bearing Length	0-1-8							
6	Point	14-7-14		Top	68 lb	163 lb	0 lb	0 lb	J4

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. Joist not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

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

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

This design is valid until 11/3/2024

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
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CCMC: 12787

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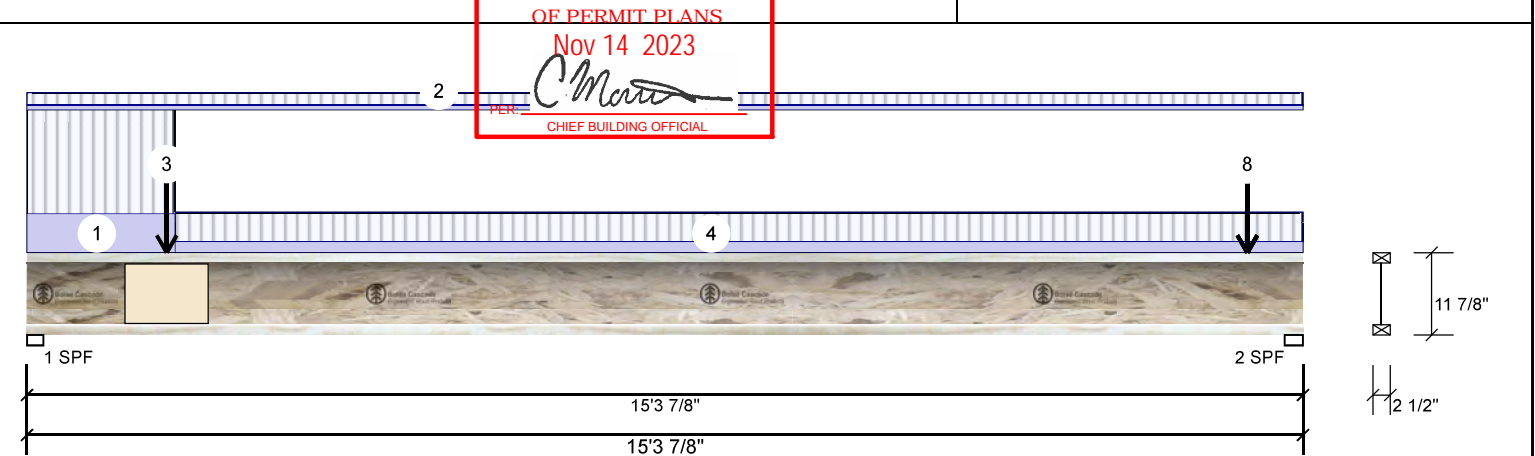


Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

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F6-B AJS 140 11.875" - **PASSED** MHP 23039



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	Bearing Length	0-1-8							
7	Point	14-7-14		Top	53 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-1-8							
8	Point	14-7-14		Top	11 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-1-8							



JULY 21, 2023

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Lumber

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chemicals

Handling & Installation

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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

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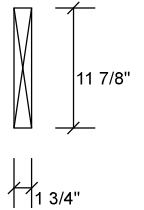
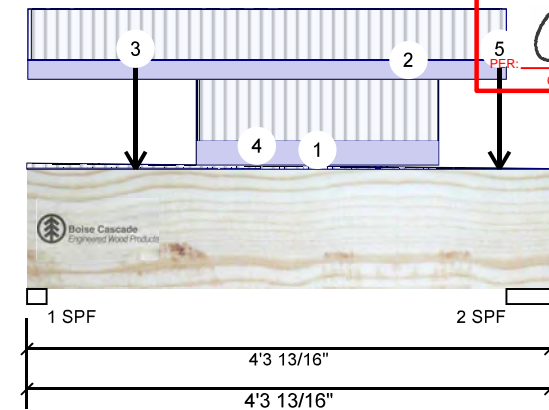


Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

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F7-A Versa-Lam LVL 2.1E 3100 SP 1750" X 11.875" - PASSED - MHP 23039



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	881	353	0	0
2	Vertical	984	396	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	1.938"	Vert	85%	441 / 1322	1763	L	1.25D+1.5L
2 - SPF	4.375"	Vert	42%	495 / 1477	1971	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1788 ft-lb	2' 1/2"	17696 ft-lb	0.101 (10%)	1.25D+1.5L	L
Unbraced	1788 ft-lb	2' 1/2"	17696 ft-lb	0.101 (10%)	1.25D+1.5L	L
Shear	1441 lb	1'1 13/16"	7232 lb	0.199 (20%)	1.25D+1.5L	L
Perm Defl in. (L/22247)	0.002	2' 9/16"	0.131 (L/360)	0.016 (2%)	D	Uniform
LL Defl inch	0.005 (L/8889)	2' 9/16"	0.131 (L/360)	0.041 (4%)	L	L
TL Defl inch	0.007 (L/6351)	2' 9/16"	0.196 (L/240)	0.038 (4%)	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.
- Top must be continuously laterally braced.
- Bottom must have sheathing attached or be continuously braced.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-3-13	0-5-3 to 0-0-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-2 to 3-11-7		Top	79 PLF	210 PLF	0 PLF	0 PLF	
3	Point	0-10-12		Near Face	105 lb	263 lb	0 lb	0 lb	J4
4	Part. Uniform	1-4-12 to 3-4-12		Near Face	100 PLF	253 PLF	0 PLF	0 PLF	
5	Point	3-10-12		Near Face	91 lb	228 lb	0 lb	0 lb	J4
	Self Weight				6 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

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

Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



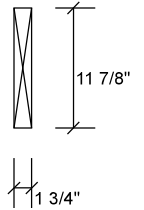
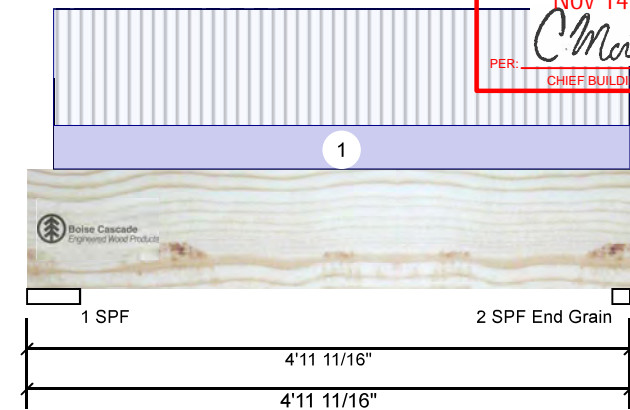


Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

Page 16 of 29

F7-B Versa-Lam LVL 2.1E 3100 SP 1750" X 11 7/8" - PASSED MHP 23039



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	54	36	0	0
2	Vertical	52	34	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	2%	45 / 81	126	L	1.25D+1.5L
2 - SPF	1.750"	Vert	3%	42 / 79	121	L	1.25D+1.5L
End Grain							

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	131 ft-lb	2'7 9/16"	17696 ft-lb	0.007 (1%)	1.25D+1.5L	L
Unbraced	131 ft-lb	2'7 9/16"	17696 ft-lb	0.007 (1%)	1.25D+1.5L	L
Shear	69 lb	1'5 1/8"	7232 lb	0.010 (1%)	1.25D+1.5L	L
Perm Defl in. (L/193416)	0.000	2'7 5/8"	0.150 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch (L/123631)	0.000	2'7 5/8"	0.150 (L/360)	0.003 (0%)	L	L
TL Defl inch (L/75422)	0.001	2'7 5/8"	0.226 (L/240)	0.003 (0%)	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.
- Top must be continuously laterally braced.
- Bottom must be laterally braced at bearings.



READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTES: EWP-FLOORS. 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	0-2-10 to 4-11-11	0-6-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				6 PLF				

Notes

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Lumber

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

chemicals

Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

This design is valid until 11/3/2024

Kott Inc.
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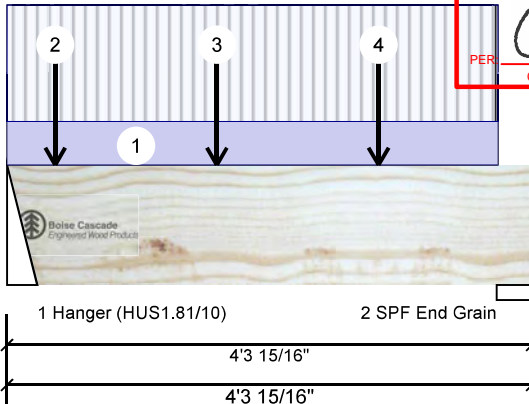


Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

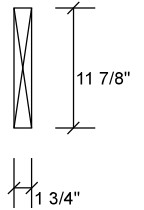
Date: 7/18/2023
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Job Name: VILLA 12-1
Project #:

Page 17 of 29

F7-C Versa-Lam LVL 2.1E 3100 SP 1750" X 11.875" - PASSED MHP 23039



TRUE COPY
OF PERMIT PLANS
Nov 14 2023
PER *C. Martin*
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:	360	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	275	116	0	0
2	Vertical	215	93	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	9%	145 / 413	558	L	1.25D+1.5L
2 - SPF End Grain	3.500"	Vert	6%	117 / 322	439	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	502 ft-lb	1'8 3/4"	17696 ft-lb	0.028 (3%)	1.25D+1.5L	L
Unbraced	502 ft-lb	1'8 3/4"	17696 ft-lb	0.028 (3%)	1.25D+1.5L	L
Shear	458 lb	1'2 7/8"	7232 lb	0.063 (6%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/77351)	2'1 9/16"	0.130 (L/360)	0.005 (0%)	D	Uniform
LL Defl inch	0.001 (L/32604)	2'1 9/16"	0.130 (L/360)	0.011 (1%)	L	L
TL Defl inch	0.002 (L/22936)	2'1 9/16"	0.196 (L/240)	0.010 (1%)	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.
- Fill all hanger nailing holes.
- Girders are designed to be supported on the bottom edge only.
- Top must be continuously laterally braced.
- Bottom must have sheathing attached or be continuously braced.

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 4-0-10		Top	15 PLF	40 PLF	0 PLF	0 PLF	
2	Point	0-4-12		Near Face	33 lb	88 lb	0 lb	0 lb	J2
3	Point	1-8-12		Near Face	47 lb	125 lb	0 lb	0 lb	J2
4	Point	3-0-12		Near Face	43 lb	115 lb	0 lb	0 lb	J2
	Self Weight				6 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

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

chemicals

Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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613-838-2775 / 905-642-4400



This design is valid until 11/3/2024



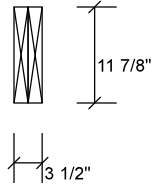
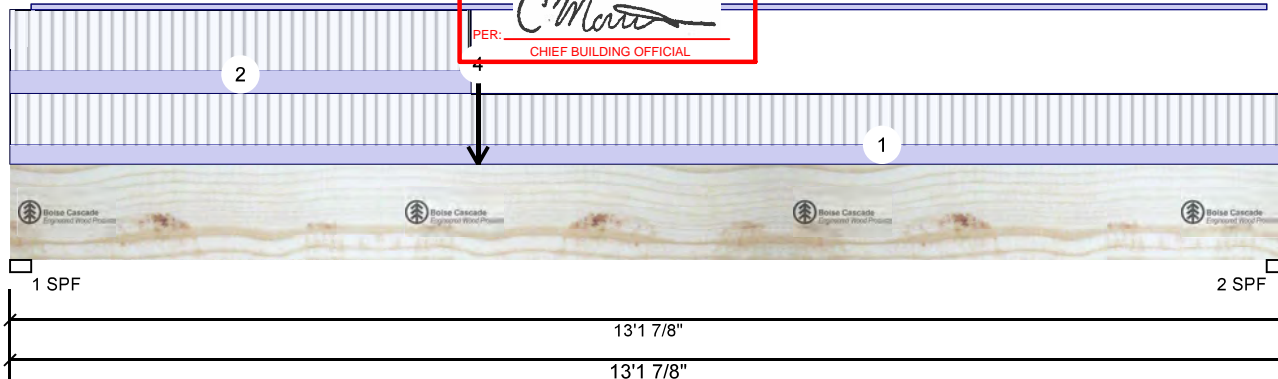
Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

F8-B Versa-Lam LVL 2.1E 3100 SP

17'50" X 11'8 7/8" 2-Ply - PASSED
TRUE COPY
OF PERMIT PLANS
Nov 14 2023
MHP 23039

PER: *C. Martin*
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:	360	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	278	197	0	0
2	Vertical	169	152	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.625"	Vert	12%	246 / 417	663	L	1.25D+1.5L
2 - SPF	2.375"	Vert	9%	190 / 253	443	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2453 ft-lb	4'9 15/16"	35392 ft-lb	0.069 (7%)	1.25D+1.5L	L
Unbraced	2453 ft-lb	4'9 15/16"	35392 ft-lb	0.069 (7%)	1.25D+1.5L	L
Shear	611 lb	1'2 1/2"	14464 lb	0.042 (4%)	1.25D+1.5L	L
Perm Defl in.	0.018 (L/8373)	6'4"	0.429 (L/360)	0.043 (4%)	D	Uniform
LL Defl inch	0.026 (L/5906)	6'1 15/16"	0.429 (L/360)	0.061 (6%)	L	L
TL Defl inch	0.045 (L/3464)	6'2 13/16"	0.643 (L/240)	0.069 (7%)	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 8'3 15/16" o.c.
- 7 Lateral slenderness ratio based on full section width.



READ ALL NOTES ON THIS PAGE AND ON THE
ENGINEERING NOTES: EWP-FLOORS. 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 13-1-14	0-2-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 4-9-1	0-3-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-10 to 12-11-8		Top	1 PLF	0 PLF	0 PLF	0 PLF	
4	Point	4-9-15		Near Face	116 lb	275 lb	0 lb	0 lb	F7
	Self Weight				12 PLF				

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



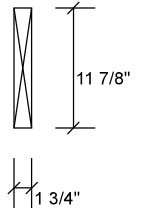
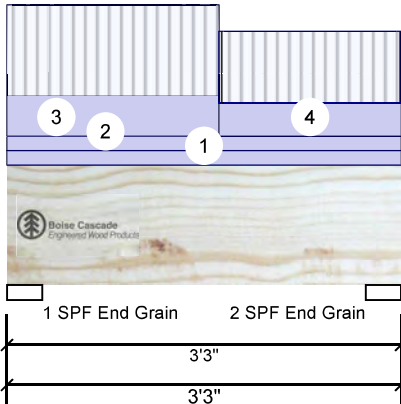


Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

Page 19 of 29

FH5-A Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" - PASSED Level: Ground Floor MHP 23039



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	394	316	0	0
2	Vertical	347	296	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	13%	394 / 592	986	L	1.25D+1.5L
2 - SPF End Grain	3.500"	Vert	12%	370 / 520	890	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	568 ft-lb	1'6 15/16"	17696 ft-lb	0.032 (3%)	1.25D+1.5L	L
Unbraced	568 ft-lb	1'6 15/16"	17696 ft-lb	0.032 (3%)	1.25D+1.5L	L
Shear	792 lb	1'11 5/8"	7232 lb	0.109 (11%)	1.25D+1.5L	L
Perm Defl in. (L/55767)	0.001	1'7 3/8"	0.093 (L/360)	0.006 (1%)	D	Uniform
LL Defl inch (L/45847)	0.001	1'7 1/4"	0.093 (L/360)	0.008 (1%)	L	L
TL Defl inch (L/25162)	0.001	1'7 5/16"	0.140 (L/240)	0.010 (1%)	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.
- Top must be continuously laterally braced.
- Bottom must have sheathing attached or be continuously braced.

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTES: EWP-FLOORS. 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 3-3-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 3-3-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-0 to 1-9-0		Near Face	112 PLF	252 PLF	0 PLF	0 PLF	J4
4	Part. Uniform	1-9-0 to 3-3-0		Near Face	91 PLF	200 PLF	0 PLF	0 PLF	J3
	Self Weight				6 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

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

chemicals

Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



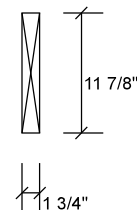
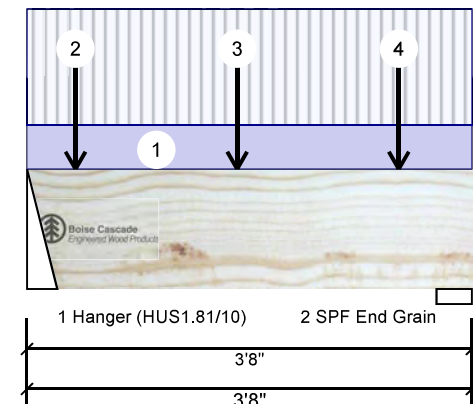


Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

Page 20 of 29

F10-A Versa-Lam LVL 2.1E 3100 SP 1750" X 11875" - PASSED MHP 23039



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	617	243	0	0
2	Vertical	599	236	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	19%	304 / 925	1229	L	1.25D+1.5L
2 - SPF End Grain	3.500"	Vert	16%	295 / 898	1193	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	927 ft-lb	1'8 13/16"	17696 ft-lb	0.052 (5%)	1.25D+1.5L	L
Unbraced	927 ft-lb	1'8 13/16"	17696 ft-lb	0.052 (5%)	1.25D+1.5L	L
Shear	714 lb	1'2 7/8"	7232 lb	0.099 (10%)	1.25D+1.5L	L
Perm Defl in. (L/52551)	0.001	1'9 7/16"	0.108 (L/360)	0.007 (1%)	D	Uniform
LL Defl inch (L/20659)	0.002	1'9 7/16"	0.108 (L/360)	0.017 (2%)	L	L
TL Defl inch (L/14829)	0.003	1'9 7/16"	0.163 (L/240)	0.016 (2%)	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.



JULY 21, 2023

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTES: EWP-FLOORS. 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 3-8-0		Top	79 PLF	210 PLF	0 PLF	0 PLF	
2	Point	0-4-13		Near Face	50 lb	132 lb	0 lb	0 lb	J6
3	Point	1-8-13		Near Face	70 lb	187 lb	0 lb	0 lb	J6
4	Point	3-0-13		Near Face	47 lb	126 lb	0 lb	0 lb	J6
	Self Weight				6 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

This design is valid until 11/3/2024

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

Kott Inc.

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



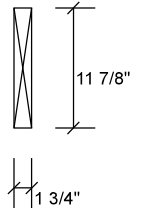
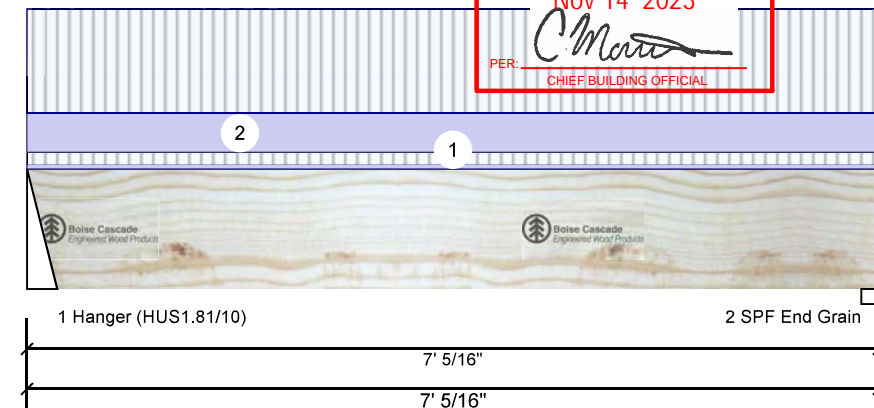


Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

Page 21 of 29

F11-A Versa-Lam LVL 2.1E 3100 SP 1750" X 11875" - PASSED MHP 23039



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	311	138	0	0
2	Vertical	302	134	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	10%	172 / 466	638	L	1.25D+1.5L
2 - SPF End Grain	1.750"	Vert	17%	167 / 453	620	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1021 ft-lb	3'6 3/4"	17696 ft-lb	0.058 (6%)	1.25D+1.5L	L
Unbraced	1021 ft-lb	3'6 3/4"	17696 ft-lb	0.058 (6%)	1.25D+1.5L	L
Shear	424 lb	1'2 7/8"	7232 lb	0.059 (6%)	1.25D+1.5L	L
Perm Defl in. (L/22244)	0.004	3'6 13/16"	0.225 (L/360)	0.016 (2%)	D	Uniform
LL Defl inch	0.008 (L/9851)	3'6 13/16"	0.225 (L/360)	0.037 (4%)	L	L
TL Defl inch	0.012 (L/6827)	3'6 13/16"	0.338 (L/240)	0.035 (4%)	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.
- Fill all hanger nailing holes.
- Girders are designed to be supported on the bottom edge only.
- Top must be continuously laterally braced.
- Bottom must be laterally braced at bearings.



JULY 21, 2023

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTES: EWP-FLOORS. 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 7-0-5	0-2-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 7-0-5	1-11-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				6 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

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

chemicals

Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



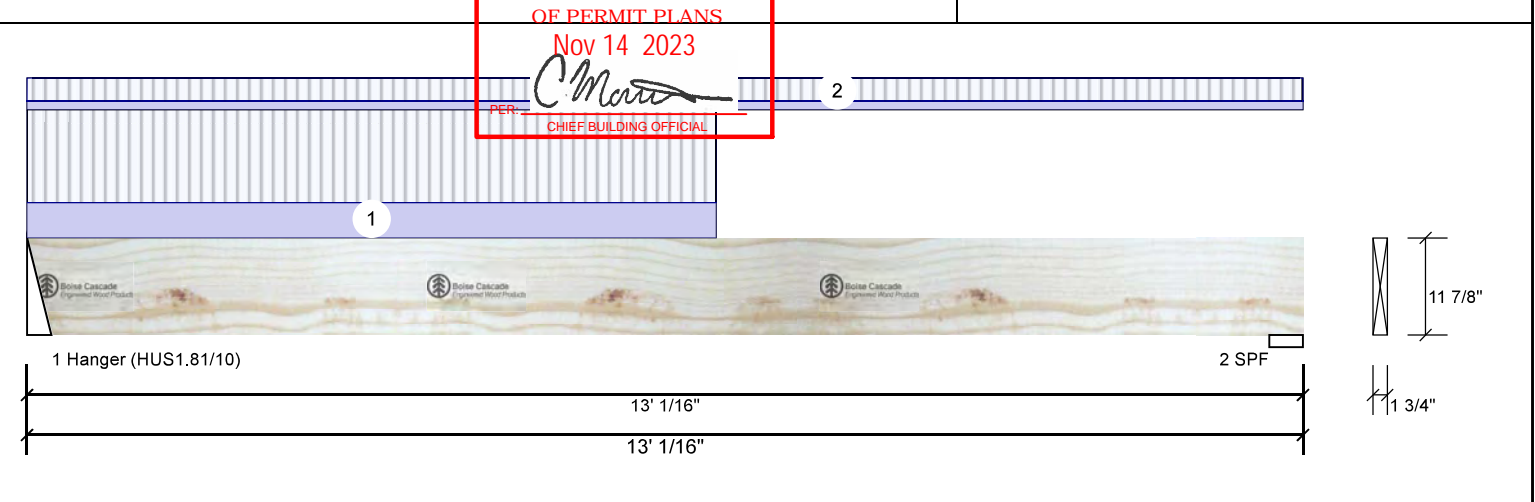


Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

Page 22 of 29

F12-A Versa-Lam LVL 2.1E 3100SP 1750" X 11875" - PASSED MHP 23039



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	529	236	0	0
2	Vertical	273	141	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	17%	296 / 793	1088	L	1.25D+1.5L
2 - SPF	4.125"	Vert	13%	176 / 410	586	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2769 ft-lb	5'5 1/2"	17696 ft-lb	0.157 (16%)	1.25D+1.5L	L
Unbraced	2769 ft-lb	5'5 1/2"	17696 ft-lb	0.157 (16%)	1.25D+1.5L	L
Shear	849 lb	1'2 7/8"	7232 lb	0.117 (12%)	1.25D+1.5L	L
Perm Defl in.	0.033 (L/4577)	6'2 1/2"	0.418 (L/360)	0.079 (8%)	D	Uniform
LL Defl inch	0.070 (L/2136)	6'1 13/16"	0.418 (L/360)	0.169 (17%)	L	
TL Defl inch	0.103 (L/1457)	6'2 1/16"	0.627 (L/240)	0.165 (16%)	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.
- Fill all hanger nailing holes.
- Girders are designed to be supported on the bottom edge only.
- Top must be continuously laterally braced.
- Bottom must be laterally braced at bearings.



JULY 21, 2023

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ENGINEERING NOTES: EWP-FLOORS. THE NOTE
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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 7-0-5	1-11-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 13-0-1	0-5-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				6 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

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

chemicals

Handling & Installation

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

- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



This design is valid until 11/3/2024



Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

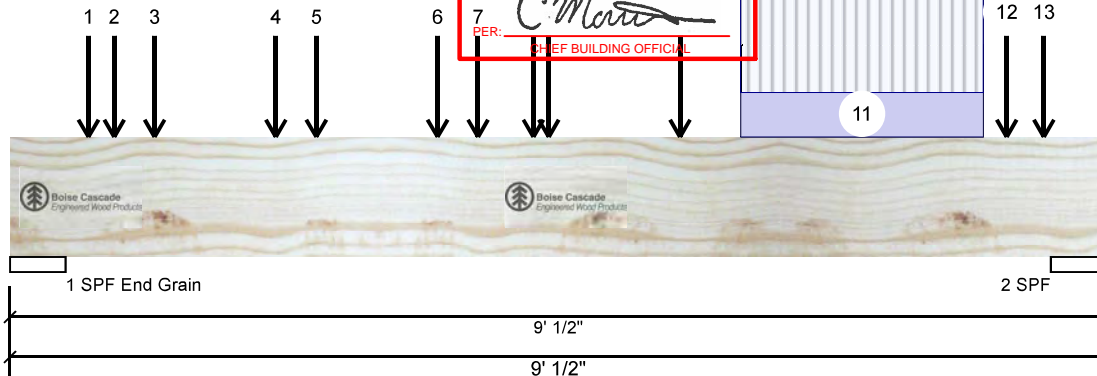
Page 23 of 29

F13-A Versa-Lam LVL 2.1E 3100 SP 1-750" X 11-875" 2-Ply - PASSED Level: Second Floor

TRUE COPY
OF PERMIT PLANS

Nov 14 2023

PER: *C. Martin*
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:	360	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	2209	979	0	0
2	Vertical	2014	868	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	5.500"	Vert	19%	1224 / 3314	4538	L	1.25D+1.5L
2 - SPF	5.500"	Vert	35%	1084 / 3021	4105	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7632 ft-lb	4'3 13/16"	35392 ft-lb	0.216 (22%)	1.25D+1.5L	L
Unbraced	7632 ft-lb	4'3 13/16"	35392 ft-lb	0.216 (22%)	1.25D+1.5L	L
Shear	4729 lb	1'5 3/8"	14464 lb	0.327 (33%)	1.25D+1.5L	L
Perm Defl in.	0.019 (L/5289)	4'5 3/8"	0.275 (L/360)	0.068 (7%)	D	Uniform
LL Defl inch	0.044 (L/2225)	4'5 3/8"	0.275 (L/360)	0.162 (16%)	L	
TL Defl inch	0.063 (L/1566)	4'5 3/8"	0.412 (L/240)	0.153 (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 must be continuously laterally braced.
- 5 Bottom must have sheathing attached or be continuously braced.
- 6 Lateral slenderness ratio based on full section width.



JULY 21, 2023

READ ALL NOTES ON THIS PAGE AND ON THE ENGINEERING NOTES: EWP-FLOORS. 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	0-7-12		Far Face	249 lb	438 lb	0 lb	0 lb	F8
2	Point	0-10-5		Near Face	148 lb	395 lb	0 lb	0 lb	J5
3	Point	1-2-5		Far Face	50 lb	132 lb	0 lb	0 lb	J6
4	Point	2-2-5		Near Face	150 lb	400 lb	0 lb	0 lb	J5
5	Point	2-6-5		Far Face	70 lb	187 lb	0 lb	0 lb	J6
6	Point	3-6-5		Near Face	126 lb	337 lb	0 lb	0 lb	J5

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

Manufacturer Info

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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





Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

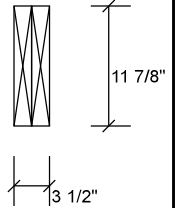
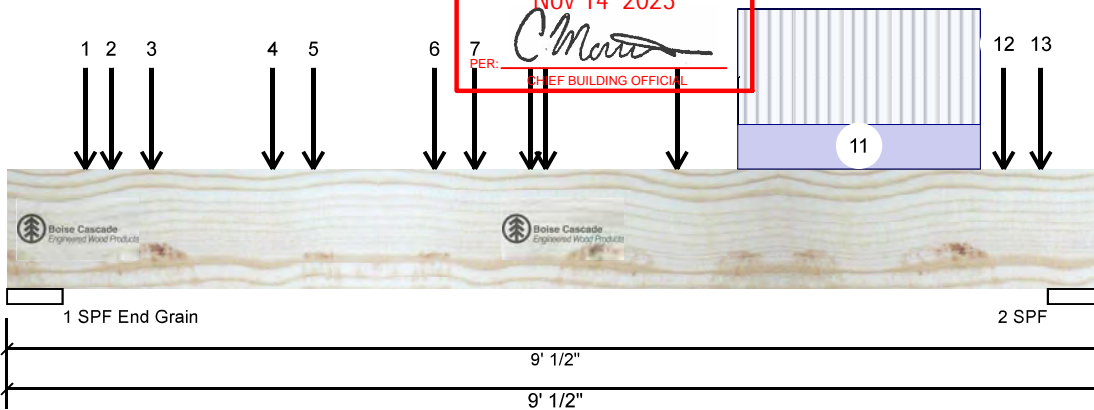
Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

Page 24 of 29

F13-A Versa-Lam LVL 2.1E 3100 SP 1-750" X 11-875" 2-Ply - PASSED Level: Second Floor

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Nov 14 2023
PER: [Signature]
CHIEF BUILDING OFFICIAL

MHP 23039



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	3-10-5		Far Face	47 lb	126 lb	0 lb	0 lb	J6
8	Point	4-3-13		Far Face	138 lb	311 lb	0 lb	0 lb	F11
9	Point	4-5-5		Near Face	113 lb	299 lb	0 lb	0 lb	J5
10	Point	5-6-5		Near Face	107 lb	281 lb	0 lb	0 lb	J4
11	Part. Uniform	6-0-5 to 8-0-5		Near Face	104 PLF	270 PLF	0 PLF	0 PLF	
12	Point	8-2-10		Far Face	236 lb	529 lb	0 lb	0 lb	F12
13	Point	8-6-5		Near Face	98 lb	248 lb	0 lb	0 lb	J4
	Self Weight				12 PLF				



JULY 21, 2023

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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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

This design is valid until 11/3/2024

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





Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

Page 25 of 29

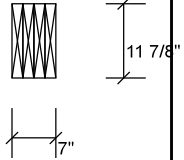
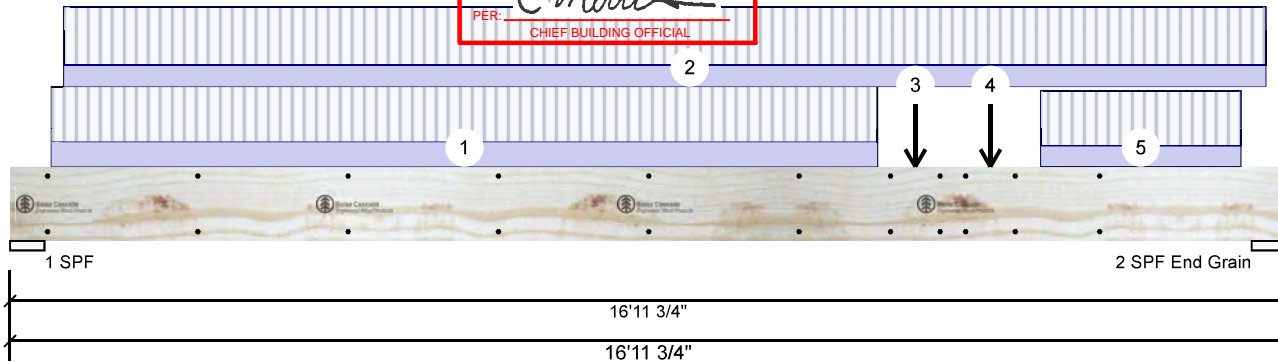
F17-A Versa-Lam LVL 2.1E 3100 SP

1-750" X 11-875" 4-Ply - PASSED Level: Second Floor
MHP 23039

TRUE COPY
OF PERMIT PLANS

Nov 14 2023

PER: *C. Morris*
CHIEF BUILDING OFFICIAL



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	4	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	Yes
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	4088	1873	0	0
2	Vertical	4190	1852	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	36%	2341 / 6132	8473	L	1.25D+1.5L
2 - SPF	5.500"	Vert	18%	2315 / 6285	8600	L	1.25D+1.5L
End Grain							

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	35160 ft-lb	8'5 3/4"	73615 ft-lb	0.478 (48%)	1.25D+1.5L	L
Unbraced	35160 ft-lb	8'5 3/4"	73615 ft-lb	0.478 (48%)	1.25D+1.5L	L
Shear	8515 lb	1'5 3/8"	28928 lb	0.294 (29%)	1.25D+1.5L	L
Perm Defl in.	0.177 (L/1095)	8'5 3/4"	0.540 (L/360)	0.329 (33%)	D	Uniform
LL Defl inch	0.394 (L/493)	8'5 15/16"	0.540 (L/360)	0.730 (73%)	L	
TL Defl inch	0.571 (L/340)	8'5 13/16"	0.809 (L/240)	0.706 (71%)	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 Fasten all plies using 2 rows of SDW22634 at 24" o.c. Maximum end distance not to exceed 12".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
- 5 Simpson fasteners applied from a single side of the member use tip values where published.
- 6 Girders are designed to be supported on the bottom edge only.
- 7 Top must be continuously laterally braced.
- 8 Bottom must have sheathing attached or be continuously braced.
- 9 Lateral slenderness ratio based on full section width.



JULY 21, 2023

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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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

Manufacturer Info

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1111 W. Jefferson St.
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(800) 232-0788
www.bc.com
CCMC: 12472

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





Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

Page 26 of 29

F17-A Versa-Lam LVL 2.1E 3100 SP

1-750" X 11-875" 4-Ply - PASSED

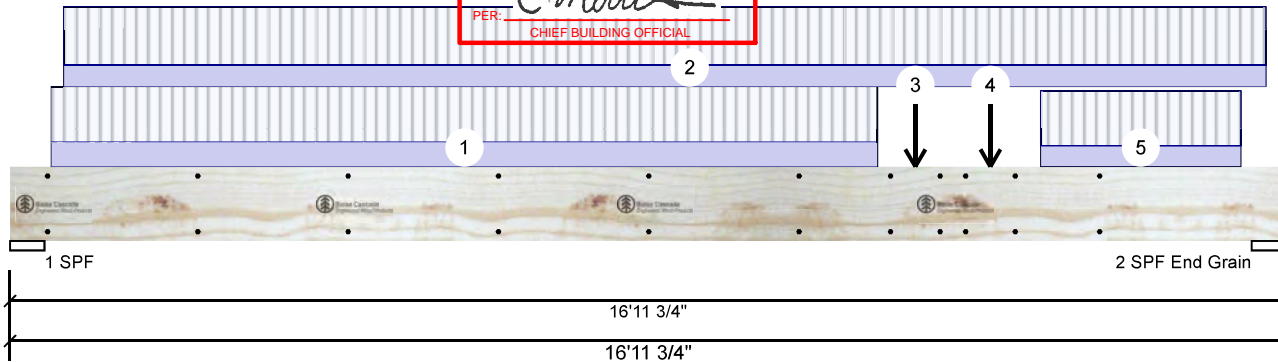
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Nov 14 2023

PER: *C. Morin*
CHIEF BUILDING OFFICIAL



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-6-9 to 11-6-9		Far Face	114 PLF	253 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-8-9 to 16-8-9		Near Face	100 PLF	267 PLF	0 PLF	0 PLF	
3	Point	12-0-9		Far Face	105 lb	253 lb	0 lb	0 lb	J4
4	Point	13-0-9		Far Face	111 lb	295 lb	0 lb	0 lb	J4
5	Part. Uniform	13-8-9 to 16-4-9		Far Face	95 PLF	253 PLF	0 PLF	0 PLF	
	Self Weight				24 PLF				



JULY 21, 2023

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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
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Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

F17-A Versa-Lam LVL 2.1E 3100 SP

1-750" X 11-8/5"

4-Ply -

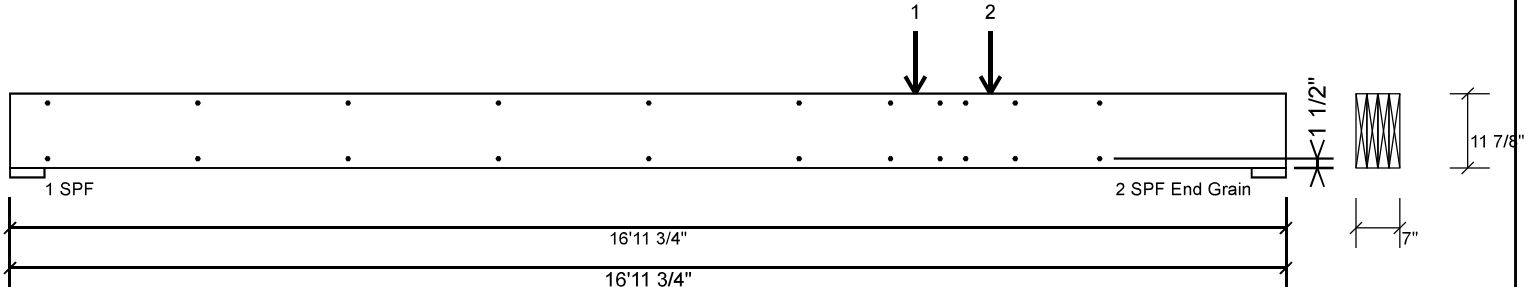
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Level: Second Floor

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Nov 14 2023

PER: *C. Martin*
CHIEF BUILDING OFFICIAL

**Multi-Ply Analysis**

Fasten all plies using 2 rows of SDW22634 at 24" o.c.. except for regions covered by concentrated load fastening. Maximum end distance not to exceed 12".

Capacity	95.0 %
Load	394.1 PLF
Yield Limit per Foot	415.0 PLF
Yield Limit per Fastener	415.0 lb.
Yield Mode	Lookup
Edge Distance	1 1/2"
Min. End Distance	6"
Load Combination	1.25D+1.5L
Duration Factor	1.00

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**Concentrated Load**

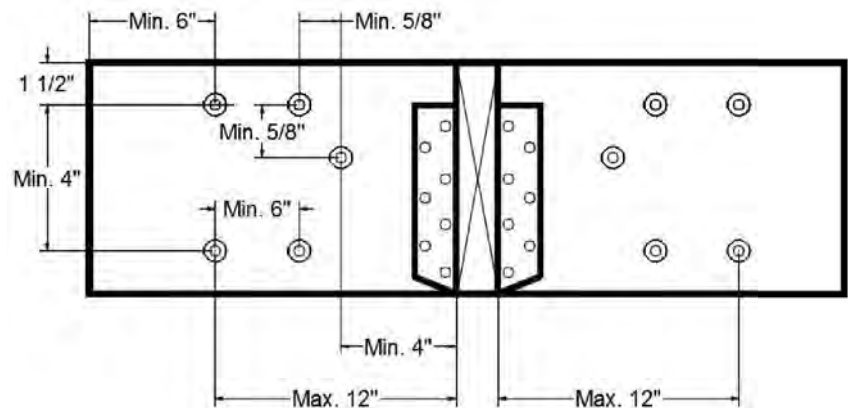
Fasten at concentrated side load at 12-0-9 with a minimum of (4) – SDW22634 in the pattern shown. All fasteners shall be installed with the head on the side of the applied load.

Capacity	19.3 %
Load	383.1 lb.
Total Yield Limit	1980.0 lb.
Yield Limit per Fastener	495.0 lb.
Yield Mode	Lookup
Load Combination	1.25D+1.5L
Duration Factor	1.00

Concentrated Load

Fasten at concentrated side load at 13-0-9 with a minimum of (4) – SDW22634 in the pattern shown. All fasteners shall be installed with the head on the side of the applied load.

Capacity	22.0 %
Load	435.9 lb.
Total Yield Limit	1980.0 lb.
Yield Limit per Fastener	495.0 lb.
Yield Mode	Lookup
Load Combination	1.25D+1.5L
Duration Factor	1.00

Min/Max fastener distances for Concentrated Side Loads**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

Boise Cascade Wood Products
1111 W. Jefferson St.
Boise, ID 83702
(800) 232-0788
www.bc.com
CCMC: 12472

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



This design is valid until 11/3/2024



Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

F8-A Versa-Lam LVL 2.1E 3100 SP

17'50" X 11'8 7/8" 2-Ply - PASSED

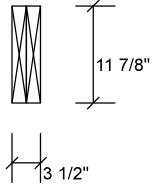
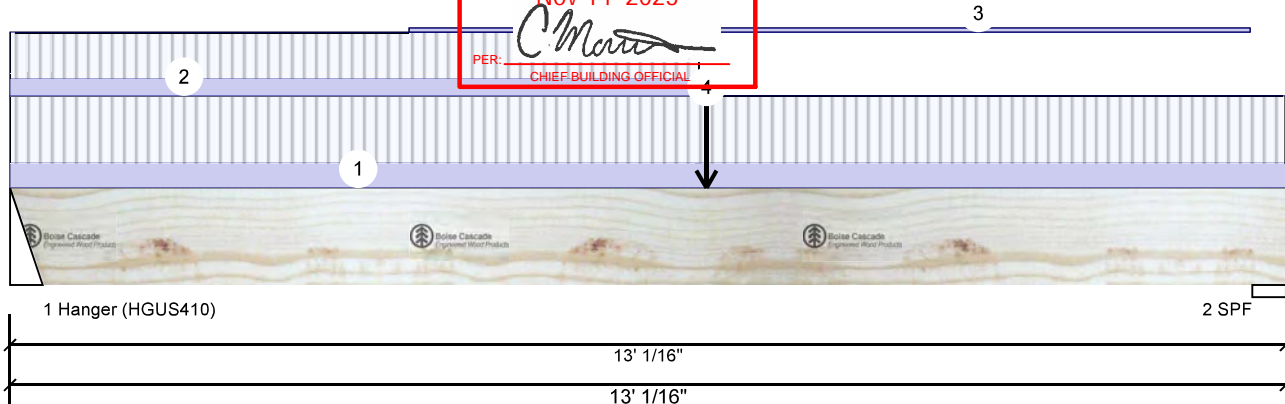
Level: Second Floor

MHP 23039

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OF PERMIT PLANS

Nov 14 2023

PER: *C. Morris*
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:	360	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	438	249	0	0
2	Vertical	461	262	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	4.000"	Vert	6%	312 / 657	968	L	1.25D+1.5L
2 - SPF	4.125"	Vert	11%	327 / 691	1018	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4913 ft-lb	7'1 3/16"	35392 ft-lb	0.139 (14%)	1.25D+1.5L	L
Unbraced	4913 ft-lb	7'1 3/16"	35392 ft-lb	0.139 (14%)	1.25D+1.5L	L
Shear	971 lb	11'8 1/16"	14464 lb	0.067 (7%)	1.25D+1.5L	L
Perm Defl in.	0.028 (L/5423)	6'7 3/8"	0.415 (L/360)	0.066 (7%)	D	Uniform
LL Defl inch	0.053 (L/2796)	6'7 3/4"	0.415 (L/360)	0.129 (13%)	L	
TL Defl inch	0.081 (L/1845)	6'7 5/8"	0.623 (L/240)	0.130 (13%)	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 be laterally braced at a maximum of 7'1 3/16" o.c.
- 8 Lateral slenderness ratio based on full section width.



JULY 21, 2023

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-0-1	0-4-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 7-0-5	0-3-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	4-0-13 to 12-7-11		Top	1 PLF	0 PLF	0 PLF	0 PLF	
4	Point	7-1-3		Near Face	243 lb	617 lb	0 lb	0 lb	F10
	Self Weight				12 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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

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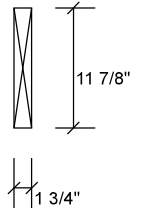
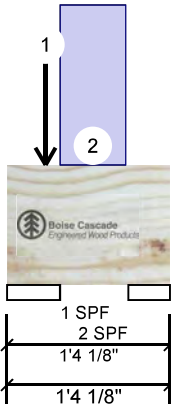
This design is valid until 11/3/2024



Client: GREENPARK
Project:
Address: ZADORRA ESTATES
OSHAWA, ON.

Date: 7/18/2023
Input by: RCO
Job Name: VILLA 12-1
Project #:

F9-A Versa-Lam LVL 2.1E 3100 SPF 1750" X 11.875" - PASSED Level: Second Floor MHP 23039



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	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	148	118	0	0
2	Vertical	0	25	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	7%	147 / 222	369	L	1.25D+1.5L
2 - SPF	4.125"	Vert	1%	35 / 0	35	Uniform	1.4D

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7 ft-lb	8 5/8"	11502 ft-lb	0.001 (0%)	1.4D	Uniform
Unbraced	7 ft-lb	8 5/8"	11502 ft-lb	0.001 (0%)	1.4D	Uniform
Shear	29 lb	1/8"	4701 lb	0.006 (1%)	1.4D	Uniform
Perm Defl in.	0.000 (L/2451907)	8 5/8"	0.023 (L/360)	0.000 (0%)	D	Uniform
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/2451907)	8 5/8"	0.034 (L/240)	0.000 (0%)	D+L	L



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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 Top must be continuously laterally braced.
- 4 Bottom must have sheathing attached or be continuously braced.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-3-13		Near Face	91 lb	148 lb	0 lb	0 lb	J6
2	Part. Uniform	0-5-4 to 0-11-12		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				6 PLF				

Notes

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

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

Manufacturer Info

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(800) 232-0788
www.bc.com
CCMC: 12472

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



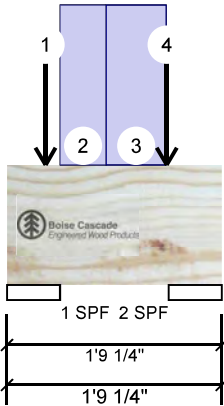


Client: GREENPARK
 Project:
 Address: ZADORRA ESTATES
 OSHAWA, ON.

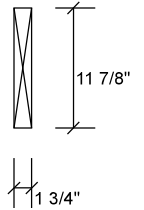
Date: 7/18/2023
 Input by: RCO
 Job Name: VILLA 12-3
 Project #:

Page 1 of 1

F9-A Versa-Lam LVL 2.1E 3100 SP 1-750" X 11-875" - PASSED Level: Second Floor MHP 23039



CORPORATION OF THE CITY OF OSHAWA
 TRUE COPY
 OF PERMIT PLANS
 Nov 14 2023
 PER: *C. Martin*
 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:	360	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	150	146	9	0
2	Vertical	92	263	113	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	8%	183 / 224	408	L	1.25D+1.5L
2 - SPF	5.250"	Vert	12%	329 / 169	498	L	1.25D+1.5S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	39 ft-lb	1'2 3/4"	13095 ft-lb	0.003 (0%)	1.25D+1.5S	L
Unbraced	39 ft-lb	1'2 3/4"	13095 ft-lb	0.003 (0%)	1.25D+1.5S	L
Shear	499 lb	4 1/8"	6436 lb	0.078 (8%)	1.25D+1.5S	L
Perm Defl in.	0.000 (L/626391)	11 7/8"	0.034 (L/360)	0.001 (0%)	D	Uniform
LL Defl inch	0.000 (L/1549881)	1'2 1/4"	0.034 (L/360)	0.000 (0%)	S+0.5L	L
TL Defl inch	0.000 (L/454435)	1' 7/16"	0.051 (L/240)	0.001 (0%)	D+S+0.5L	L



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

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 Top must be continuously laterally braced.
- 4 Bottom must have sheathing attached or be continuously braced.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-3-13		Near Face	87 lb	142 lb	0 lb	0 lb	J6
2	Part. Uniform	0-5-4 to 0-9-13		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-9-13 to 1-3-12		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Point	1-3-13		Near Face	242 lb	100 lb	122 lb	0 lb	J6
	Self Weight				6 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

This design is valid until 11/3/2024

Manufacturer Info

Boise Cascade Wood Products
 1111 W. Jefferson St.
 Boise, ID 83702
 (800) 232-0788
 www.bc.com
 CCMC: 12472

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