

Engineering Notes: EWP-Floors

MHP 23037**RESPONSIBILITIES**

THE RESPONSIBILITY OF THE UNDERSIGNED ENGINEER IS ONLY LIMITED TO THE CALCULATION OF THIS BUILDING COMPONENT FOR THE LOADS AND CONDITIONS SHOWN ON THIS DRAWING.

THE RESPONSIBILITY OF THE UNDERSIGNED IS LIMITED TO THE VERIFICATION OF THE STRUCTURAL CAPACITY OF THE FLOOR JOISTS AND LVL BEAMS BASED ON PLACEMENT AS SHOWN ON THE LAYOUT. THE LOADS APPLIED ARE LIMITED TO THE GRAVITY EFFECTS OF THE SPECIFIED LOADS. THE STRUCTURAL INTEGRITY OF THE BUILDING AND THE EFFECT OF WIND, UPLIFT, SEISMIC, LATERAL OR OTHER FORCES, CALCULATION OF ADEQUATE SUPPORT AND ANCHORAGE OF COMPONENTS, AS WELL AS THE DIMENSIONS AND DESIGN LOADS USED TO CALCULATE COMPONENTS ARE THE RESPONSIBILITY OF THE OVERALL BUILDING DESIGNER. FLOOR JOISTS AND OSB RIM BOARD ARE DESIGNED TO CARRY UNIFORMLY DISTRIBUTED LOADS ONLY. POINT LOADS SHOULD BE TRANSFERRED THROUGH THE FLOOR CAVITY WITH TRANSFER BLOCKS. STRUCTURAL ELEMENTS SUCH AS WALLS, POSTS, CONNECTORS, AND TRANSFER BLOCKS ARE THE RESPONSIBILITY OF THE OVERALL BUILDING DESIGNER.

THE UNDERSIGNED ENGINEER DISCLAIMS ANY RESPONSIBILITY FOR DAMAGES AS A RESULT OF BEING FURNISHED FAULTY OR INCORRECT INFORMATION, SPECIFICATIONS AND/OR DESIGNS.

COMPONENT DESIGN INFORMATION

1. THIS BUILDING COMPONENT IS CERTIFIED AS AN INDIVIDUAL COMPONENT FOR THE LOADS AND CONDITIONS SHOWN ON THE CALCULATION PAGE BASED ON INFORMATION PROVIDED BY KOTT DESIGN.
2. THE BUILDING COMPONENT USED IN CONSTRUCTION MUST BE THE SAME AS INDICATED ON THE DRAWINGS.
3. UNLESS NOTED OTHERWISE ON THE LAYOUT OR BEAM CALCULATION SHEET, MEMBERS CONSISTING OF MULTIPLE PLIES MUST BE CONNECTED AS PER THE DOCUMENT "MULTIPLE MEMBER CONNECTION DETAILS" SHOWN ON PAGE 2 OF THIS DOCUMENT.
4. PASS-THRU TRANSFER BLOCK FRAMING IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.
5. IT IS ASSUMED THAT EACH LVL BEAM WHERE NOT SEATED IN A HANGER IS ATTACHED USING (4) FOUR 3-1/4" COMMON SPIRAL NAILS FOR UP TO 5.5" LONG BEARINGS AND USING (6) SIX 3-1/4" COMMON SPIRAL NAILS FOR BEARINGS EQUAL TO OR LONGER THAN 5.5", UNLESS INDICATED OTHERWISE.

CODE

THIS BUILDING COMPONENT IS DESIGNED IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA, THE ONTARIO BUILDING CODE, CCMC AND CANADIAN STANDARDS ASSOCIATION GUIDELINES.

HANDLING AND INSTALLATION

1. DO NOT DRILL ANY HOLE, CUT OR NOTCH A CERTIFIED BUILDING COMPONENT WITHOUT A WRITTEN PRE-AUTHORIZATION.
2. INSTALLATION AND ASSEMBLY OF FLOOR JOISTS AND LVL BEAMS IS TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUFACTURER'S LITERATURE.

MHP 23037

CORPORATION OF THE CITY OF OSHAWA
TRUE COPY
OF PERMIT PLANS
Nov 11 2023
PER: *C. Marro*
CHIEF BUILDING OFFICIAL

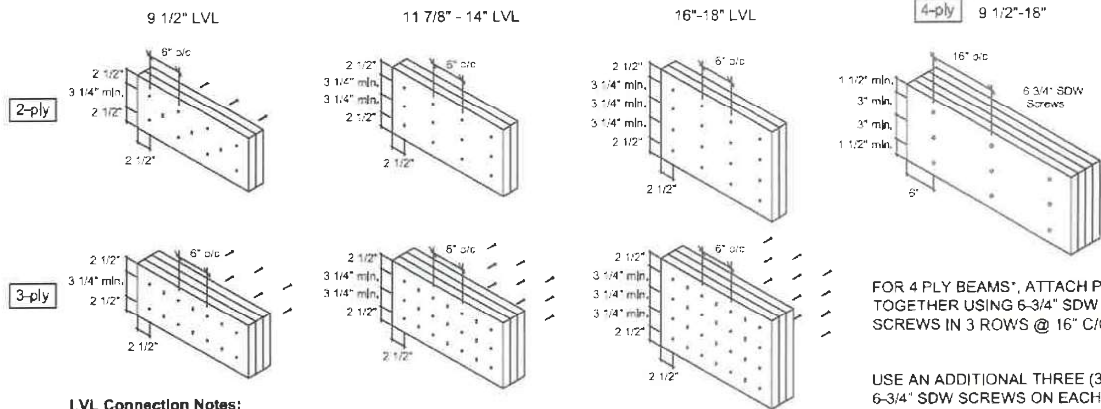
ENG-IM0723-152-KTF - GREENPARK - ZADORA ESTATES - VILLA 7-1,2,3

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MULTIPLE MEMBER CONNECTIONS FOR BEAMS SHOWN ON KOTT LAYOUTS



MULTIPLE MEMBER CONNECTIONS FOR UNIFORMLY DISTRIBUTED TOP & SIDE LOADED LVL BEAMS SHOWN ON KOTT LAYOUTS



LVL Connection Notes:

- LVL ply width is 1-3/4"
- Nails to be 3 1/2" common wire nails.
- Nails to be located 2 1/2" min. from the top and bottom of the member. Start all nails 2 1/2" min. from ends.
- Minimum 3 1/4" spacing between rows.
- Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.
- Head of all specified screws must be on the loaded side.

FOR 4 PLY BEAMS*, ATTACH PLIES TOGETHER USING 6-3/4" SDW SCREWS IN 3 ROWS @ 16" C/C.

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

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

FOR MULTIPLE MEMBER CONNECTION OF BOISE ALLJOISTS REFER TO THE BOISE CASCADE INSTALLATION GUIDE

Installation Guide



(Open your phone's camera and hover over this QR code to access it)

Last Revised January 13, 2023



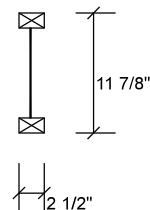
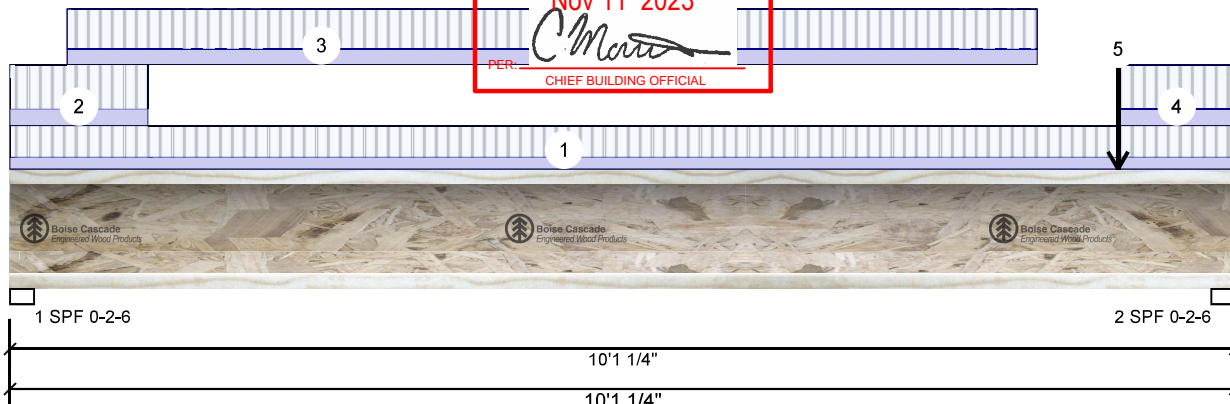
Client: GREENPARK GROUP
Project: ZADORA ESTATES
Address:

Date: 2023-07-17
Input by: K T
Job Name: VILLA 7-1 2 3
Project #: VILLA-1 2 3

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MHP 23037

F10 AJS 140 11.875" - PASSED Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
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	332	126	0	0
2	Vertical	328	124	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	39%	157 / 499	656	L	1.25D+1.5L
2 - SPF	2.375"	Vert	38%	155 / 492	647	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1472 ft-lb	5' 7/16"	5305 ft-lb	0.278 (28%)	1.25D+1.5L	L
Unbraced	1472 ft-lb	5' 7/16"	5305 ft-lb	0.278 (28%)	1.25D+1.5L	L
Shear	639 lb	1 5/8"	2350 lb	0.272 (27%)	1.25D+1.5L	L
Perm Defl in.	0.020 (L/5906)	5' 9/16"	0.328 (L/360)	0.061 (6%)	D	Uniform
LL Defl inch	0.053 (L/2237)	5' 9/16"	0.328 (L/360)	0.161 (16%)	L	
TL Defl inch	0.073 (L/1623)	5' 9/16"	0.492 (L/240)	0.148 (15%)	D+L	L



JULY 21, 2023

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 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 10-1-4	0-8-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-1-10	0-11-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-5-10 to 8-5-10		Near Face	13 PLF	34 PLF	0 PLF	0 PLF	
4	Tie-In	9-1-10 to 10-1-4	0-11-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	9-1-10		Near Face	15 lb	40 lb	0 lb	0 lb	J8

Notes

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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

Manufacturer Info

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

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



This design is valid until 2026-05-29



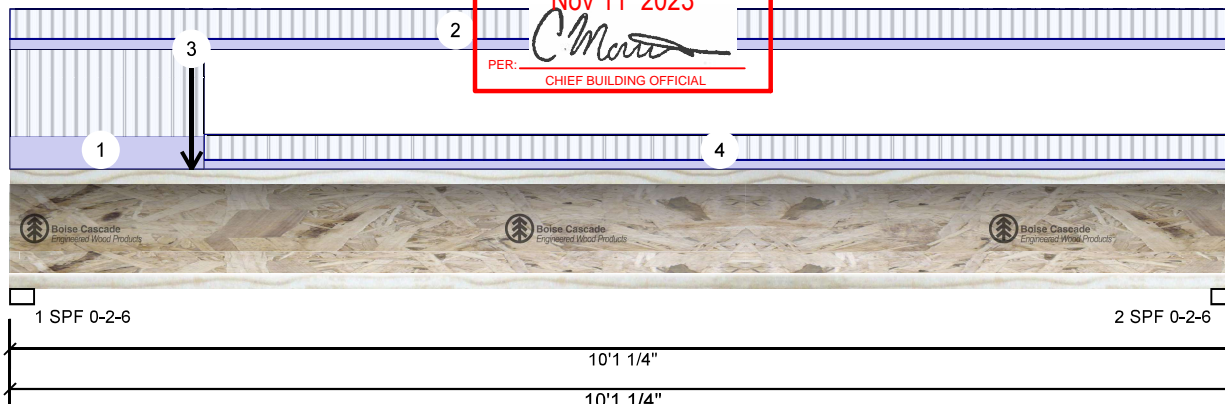
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MHP 23037

F10-A AJS 140 11.875" - PASSED Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
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	474	179	0	0
2	Vertical	240	90	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	56%	224 / 711	935	L	1.25D+1.5L
2 - SPF	2.375"	Vert	28%	113 / 360	473	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1355 ft-lb	4'1 1/4"	5305 ft-lb	0.255 (26%)	1.25D+1.5L	L
Unbraced	1355 ft-lb	4'1 1/4"	5305 ft-lb	0.255 (26%)	1.25D+1.5L	L
Shear	912 lb	1 5/8"	2350 lb	0.388 (39%)	1.25D+1.5L	L
Perm Defl in.	0.019 (L/6357)	4'8 7/8"	0.328 (L/360)	0.057 (6%)	D	Uniform
LL Defl inch	0.049 (L/2399)	4'8 15/16"	0.328 (L/360)	0.150 (15%)	L	
TL Defl inch	0.068 (L/1742)	4'8 15/16"	0.492 (L/240)	0.138 (14%)	D+L	L



JULY 21, 2023

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 8'7 5/16" 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 1-7-4	1-7-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 10-1-4	0-6-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-6-0		Far Face	91 lb	237 lb	0 lb	0 lb	F15
4	Tie-In	1-7-4 to 10-1-4	0-5-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	

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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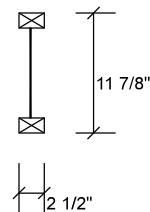
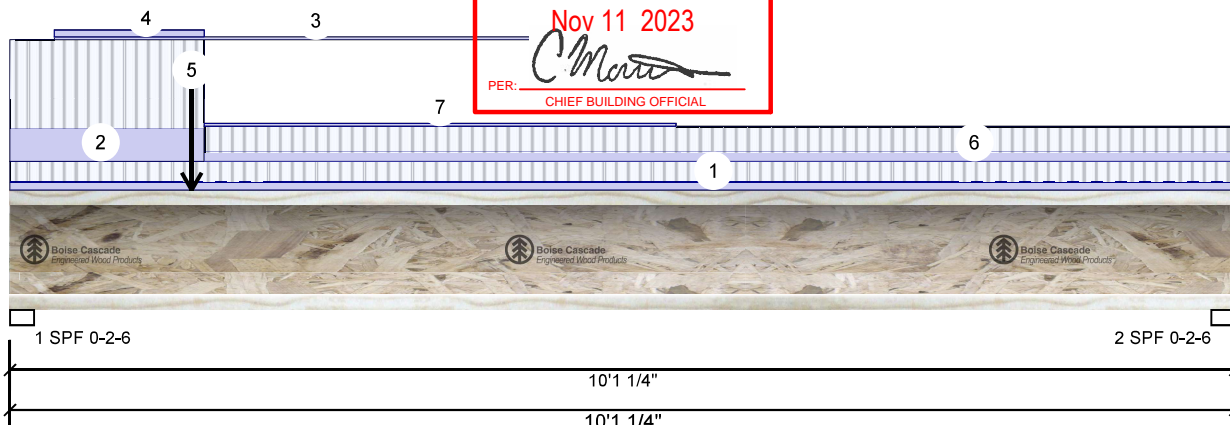
MHP 23037

F10-B AJS 140 11.875" - PASSED Level: Ground Floor

THE CITY OF OSHAWA
TRUE COPY
OF PERMIT PLANS

Nov 11 2023

PER: *C. M. ...*
CHIEF BUILDING OFFICIAL



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
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	440	190	0	0
2	Vertical	206	85	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	53%	238 / 659	897	L	1.25D+1.5L
2 - SPF	2.375"	Vert	25%	106 / 309	415	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1250 ft-lb	3'10 13/16"	5305 ft-lb	0.236 (24%)	1.25D+1.5L	L
Unbraced	1250 ft-lb	3'10 13/16"	5305 ft-lb	0.236 (24%)	1.25D+1.5L	L
Shear	877 lb	1 5/8"	2350 lb	0.373 (37%)	1.25D+1.5L	L
Perm Defl in.	0.019 (L/6247)	4'7 15/16"	0.328 (L/360)	0.058 (6%)	D	Uniform
LL Defl inch	0.044 (L/2711)	4'8 7/16"	0.328 (L/360)	0.133 (13%)	L	
TL Defl inch	0.062 (L/1891)	4'8 1/4"	0.492 (L/240)	0.127 (13%)	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 8'7 5/16" 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 10-1-4	0-4-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-7-4	1-7-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-4-6 to 5-5-15		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-4-6 to 1-7-4		Top	5 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-6-0		Near Face	97 lb	237 lb	0 lb	0 lb	F15
6	Tie-In	1-7-4 to 10-1-4	0-5-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-7-4 to 5-5-15		Top	2 PLF	0 PLF	0 PLF	0 PLF	

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-ply fastening details and handling/erection details
- Damaged Joists must not be used
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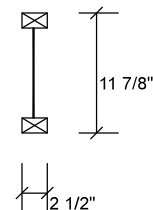
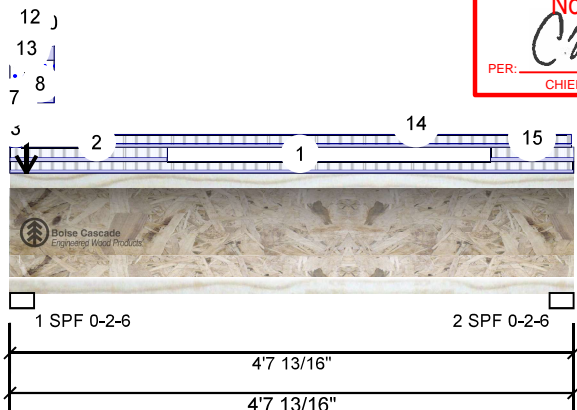
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MHP 23037**F11 AJS 140 11.875" - PASSED**

Level: Ground Floor

**Member Information**

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 CBC 2012(2020 Update)
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	188	505	426	0
2	Vertical	142	54	1	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	87%	632 / 827	1459	L	1.25D+1.5S +L
2 - SPF	2.375"	Vert	19%	67 / 213	280	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	265 ft-lb	2'3 1/16"	4721 ft-lb	0.056 (6%)	1.25D+1.5L	L
Unbraced	265 ft-lb	2'3 1/16"	4721 ft-lb	0.056 (6%)	1.25D+1.5L	L
Shear	305 lb	1 5/8"	2092 lb	0.146 (15%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/39200)	2'3 1/16"	0.146 (L/360)	0.009 (1%)	D	Uniform
LL Defl inch	0.003 (L/15202)	2'3 7/16"	0.146 (L/360)	0.024 (2%)	L+0.5S	L
TL Defl inch	0.005 (L/10954)	2'3 5/16"	0.219 (L/240)	0.022 (2%)	D+L+0.5S	L



JULY 21, 2023

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- If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-7-13	0-7-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-3-9	0-9-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 0-1-2		Top	17 PLF	0 PLF	44 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 0-1-2		Top	20 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Tapered Start	0-0-0		Top	2 PLF	5 PLF	0 PLF	0 PLF	

Continued on page 2...

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Lumber

- Dry service conditions, unless noted otherwise
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chemicals

Handling & Installation

- Joist flanges must not be cut or drilled
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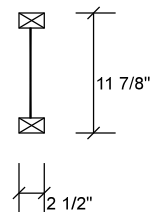
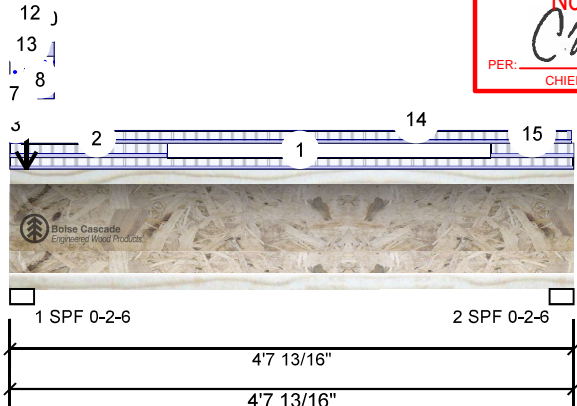
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MHP 23037**F11 AJS 140 11.875" - PASSED**

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	End	0-1-2			2 PLF	5 PLF	0 PLF	0 PLF	
6	Part. Uniform	0-0-0 to 0-1-2		Top	1 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
7	Part. Uniform	0-0-0 to 0-1-2		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Part. Uniform	0-0-0 to 0-4-6		Top	34 PLF	0 PLF	89 PLF	0 PLF	
9	Part. Uniform	0-0-0 to 0-4-6		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
10	Tapered Start	0-0-0		Top	4 PLF	11 PLF	0 PLF	0 PLF	
	End	0-4-6			4 PLF	11 PLF	0 PLF	0 PLF	
11	Part. Uniform	0-0-0 to 0-4-6		Top	2 PLF	0 PLF	0 PLF	0 PLF	Rim Board Self Weight
12	Part. Uniform	0-0-0 to 0-4-6		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
13	Point	0-1-10		Top	389 lb	46 lb	390 lb	0 lb	B9
	Bearing Length	0-1-8							
14	Part. Uniform	0-7-9 to 4-7-9		Near Face	10 PLF	27 PLF	0 PLF	0 PLF	
15	Tie-In	3-11-9 to 4-7-13	0-9-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	



JULY 21, 2023

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Notes

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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 2026-05-29

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 GROUP
Project: ZADORA ESTATES
Address:

Date: 2023-07-17
Input by: K T
Job Name: VILLA 7-1,2,3
Project #: VILLA-1-1-3

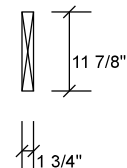
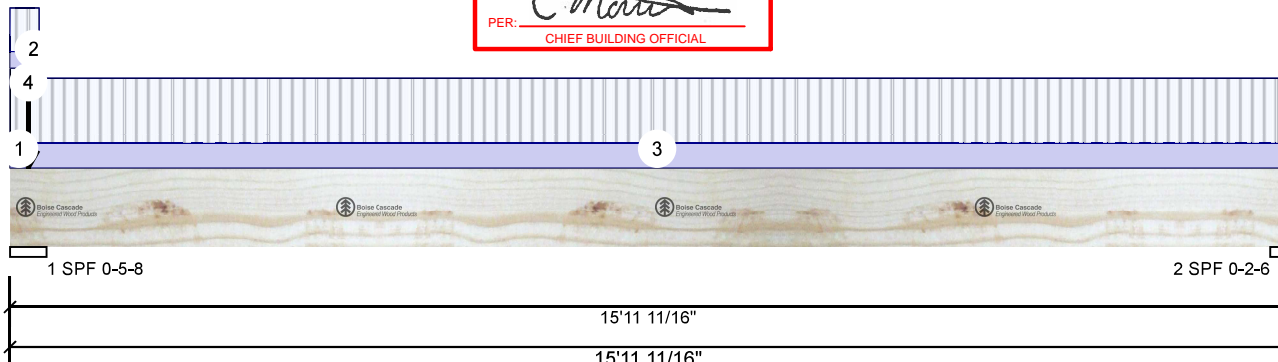
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F12 Versa-Lam LVL 2.1E 3100 SP 1-750" X 11.875" - PASSED Level: Ground Floor

CORPORATION OF THE CITY OF SURREY
TRUE COPY
OF PERMIT PLANS

Nov 11 2023

PER: 
CHIEF BUILDING OFFICIAL



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
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	934	437	0	0
2	Vertical	118	91	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	33%	546 / 1400	1947	L	1.25D+1.5L
2 - SPF	2.375"	Vert	11%	113 / 176	290	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1099 ft-lb	8'1 7/16"	17696 ft-lb	0.062 (6%)	1.25D+1.5L	L
Unbraced	1099 ft-lb	8'1 7/16"	17696 ft-lb	0.062 (6%)	1.25D+1.5L	L
Shear	253 lb	1'5 3/8"	6608 lb	0.038 (4%)	1.25D+1.5L	L
Perm Defl in.	0.029 (L/6400)	8'1 7/16"	0.515 (L/360)	0.056 (6%)	D	Uniform
LL Defl inch	0.038 (L/4929)	8'1 7/16"	0.515 (L/360)	0.073 (7%)	L	L
TL Defl inch	0.067 (L/2785)	8'1 7/16"	0.772 (L/240)	0.086 (9%)	D+L	L

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top must be continuously laterally braced.
- 5 Bottom must be laterally braced at bearings.



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-12	0-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-4-6	0-3-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-12 to 15-11-11	0-4-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	0-2-12		Top	342 lb	808 lb	0 lb	0 lb	C1
	Bearing Length	0-3-8							
	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

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 2026-05-29

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





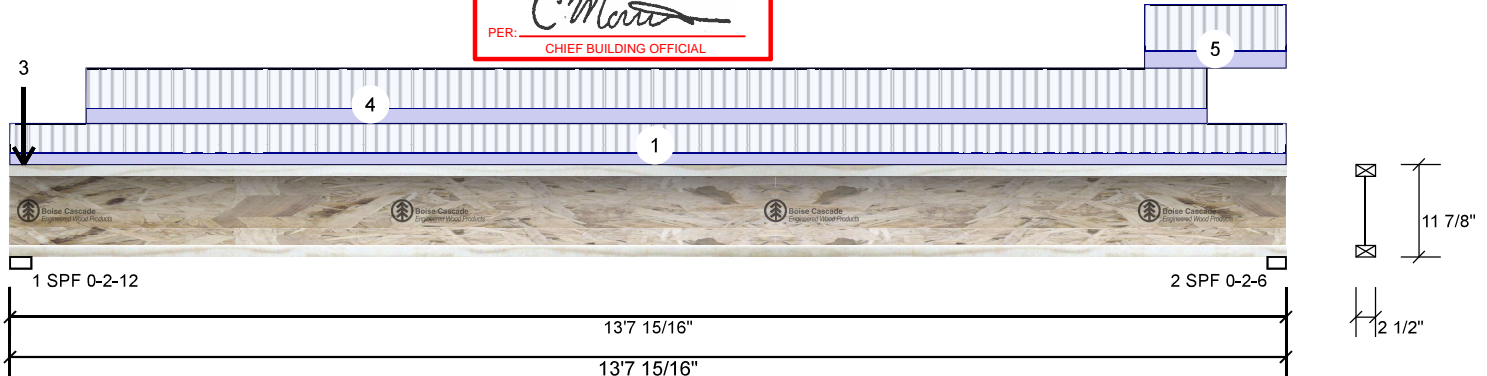
Client: GREENPARK GROUP
Project: ZADORA ESTATES
Address:

Date: 2023-07-17
Input by: K T
Job Name: VILLA 7-1 2 3
Project #: VILLA-1-13

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MHP 23037**F13 AJS 140 11.875" - PASSED**

Level: Ground Floor

**Member Information**

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
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	305	114	0	0
2	Vertical	341	127	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.750"	Vert	34%	143 / 458	601	L	1.25D+1.5L
2 - SPF	2.375"	Vert	40%	159 / 512	671	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2073 ft-lb	6'10 11/16"	5305 ft-lb	0.391 (39%)	1.25D+1.5L	L
Unbraced	2073 ft-lb	6'10 11/16"	5305 ft-lb	0.391 (39%)	1.25D+1.5L	L
Shear	657 lb	13'6 5/16"	2350 lb	0.280 (28%)	1.25D+1.5L	L
Perm Defl in.	0.046 (L/3459)	6'10 3/8"	0.445 (L/360)	0.104 (10%)	D	Uniform
LL Defl inch	0.124 (L/1288)	6'10 3/8"	0.445 (L/360)	0.279 (28%)	L	
TL Defl inch	0.171 (L/939)	6'10 3/8"	0.668 (L/240)	0.256 (26%)	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 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 13-7-15	0-6-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-1-13		Top	1 lb	2 lb	0 lb	0 lb	
	Bearing Length	0-1-8							
3	Point	0-1-13		Top	1 lb	2 lb	0 lb	0 lb	
	Bearing Length	0-1-8							
4	Part. Uniform	0-9-13 to 12-9-13		Far Face	10 PLF	27 PLF	0 PLF	0 PLF	
5	Tie-In	12-1-13 to 13-7-15	0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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

Lumber

1. Dry service conditions, unless noted otherwise
2. 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 2026-05-29

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
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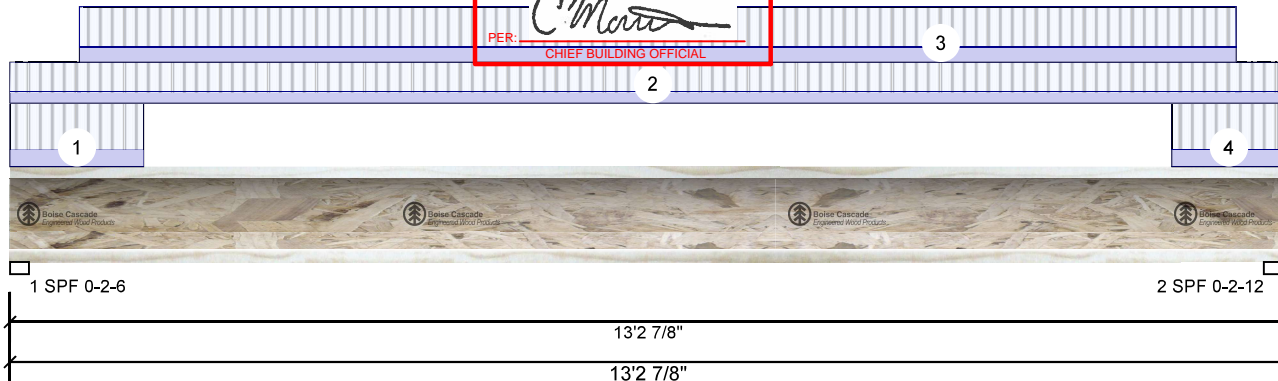
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Input by: K T
Job Name: VILLA 7-1,2,3
Project #: VILLA-1-13

Page 8 of 42

F13-A AJS 140 11.875" - PASSED**MHP 23037**

Level: Ground Floor

**Member Information**

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
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	333	124	0	0
2	Vertical	334	125	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	39%	155 / 499	654	L	1.25D+1.5L
2 - SPF	2.750"	Vert	37%	156 / 501	657	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1962 ft-lb	6'7 1/8"	5305 ft-lb	0.370 (37%)	1.25D+1.5L	L
Unbraced	1962 ft-lb	6'7 1/8"	5305 ft-lb	0.370 (37%)	1.25D+1.5L	L
Shear	640 lb	1 5/8"	2350 lb	0.273 (27%)	1.25D+1.5L	L
Perm Defl in.	0.042 (L/3738)	6'7 3/16"	0.431 (L/360)	0.096 (10%)	D	Uniform
LL Defl inch	0.112 (L/1392)	6'7 3/16"	0.431 (L/360)	0.259 (26%)	L	
TL Defl inch	0.153 (L/1014)	6'7 3/16"	0.647 (L/240)	0.237 (24%)	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 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 1-4-10	0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 13-2-14	0-6-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-8-10 to 12-8-10		Far Face	10 PLF	27 PLF	0 PLF	0 PLF	
4	Tie-In	12-0-10 to 13-2-14	0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

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

This design is valid until 2026-05-29

Manufacturer Info

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

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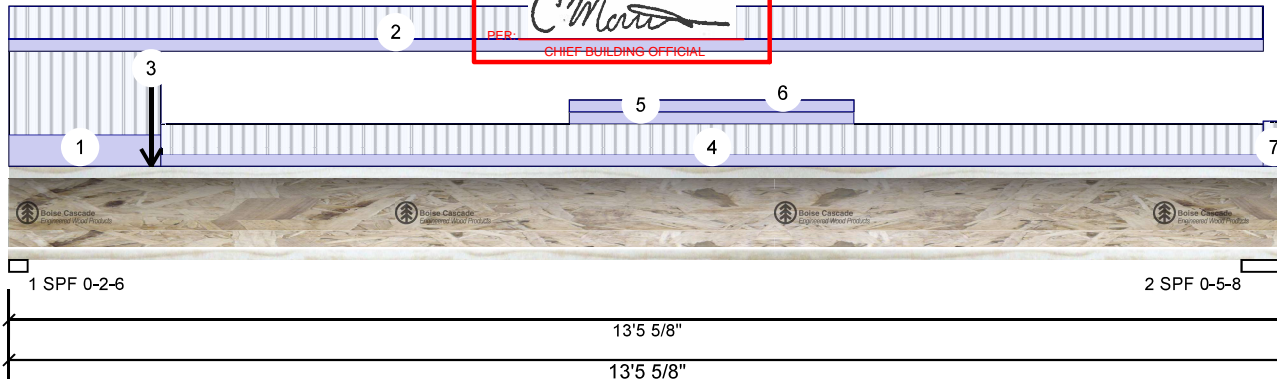
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Date: 2023-07-21
Input by: K T
Job Name: VILLA 7-1,2,3
Project #: VILLA-1-13

Page 1 of 1

MHP 23037**F13-B AJS 140 11.875" - PASSED**

Level: Ground Floor

**Member Information**

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
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	626	259	0	0
2	Vertical	358	165	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%	324 / 939	1263	L	1.25D+1.5L
2 - SPF	5.500"	Vert	39%	206 / 538	744	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2598 ft-lb	6'2 3/16"	5305 ft-lb	0.490 (49%)	1.25D+1.5L	L
Unbraced	2598 ft-lb	6'2 3/16"	5305 ft-lb	0.490 (49%)	1.25D+1.5L	L
Shear	1239 lb	1 5/8"	2350 lb	0.527 (53%)	1.25D+1.5L	L
Perm Defl in.	0.068 (L/2299)	6'6 3/8"	0.431 (L/360)	0.157 (16%)	D	Uniform
LL Defl inch	0.140 (L/1111)	6'4 5/8"	0.431 (L/360)	0.324 (32%)	L	
TL Defl inch	0.207 (L/749)	6'5 1/8"	0.647 (L/240)	0.320 (32%)	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 11'11 5/8" 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 1-7-4	1-7-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 13-2-14	0-7-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-6-0		Far Face	104 lb	275 lb	0 lb	0 lb	F15
4	Tie-In	1-7-4 to 13-2-14	0-7-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Part. Uniform	5-11-0 to 8-11-0		Top	9 PLF	0 PLF	0 PLF	0 PLF	
6	Part. Uniform	5-11-0 to 8-11-0		Top	9 PLF	0 PLF	0 PLF	0 PLF	
7	Tie-In	13-2-14 to 13-5-10	0-7-7	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

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 2026-05-29

Manufacturer Info

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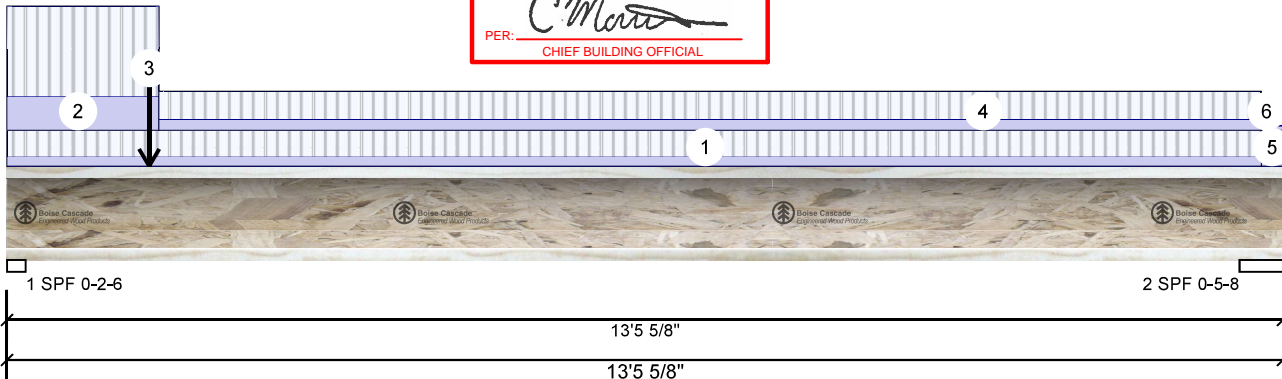
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Job Name: VILLA 7-1,2,3
Project #: VILLA-1-13

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MHP 23037**F13-C AJS 140 11.875" - PASSED**

Level: Ground Floor

**Member Information**

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 CBC 2012(2020 Update)
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	586	221	0	0
2	Vertical	296	111	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	69%	276 / 879	1155	L	1.25D+1.5L
2 - SPF	5.500"	Vert	30%	139 / 443	582	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2060 ft-lb	5'8 1/4"	5305 ft-lb	0.388 (39%)	1.25D+1.5L	L
Unbraced	2060 ft-lb	5'8 1/4"	5305 ft-lb	0.388 (39%)	1.25D+1.5L	L
Shear	1133 lb	1 5/8"	2350 lb	0.482 (48%)	1.25D+1.5L	L
Perm Defl in.	0.045 (L/3470)	6'3 3/4"	0.431 (L/360)	0.104 (10%)	D	Uniform
LL Defl inch	0.119 (L/1305)	6'3 13/16"	0.431 (L/360)	0.276 (28%)	L	
TL Defl inch	0.164 (L/948)	6'3 13/16"	0.647 (L/240)	0.253 (25%)	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 11'11 5/8" 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 13-2-14	0-5-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-7-4	1-7-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-6-0		Near Face	113 lb	298 lb	0 lb	0 lb	F15
4	Tie-In	1-7-4 to 13-2-14	0-6-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	13-2-14 to 13-5-10	0-5-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Tie-In	13-2-14 to 13-5-10	0-2-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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

Lumber

1. Dry service conditions, unless noted otherwise
2. 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

Manufacturer Info

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

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



This design is valid until 2026-05-29



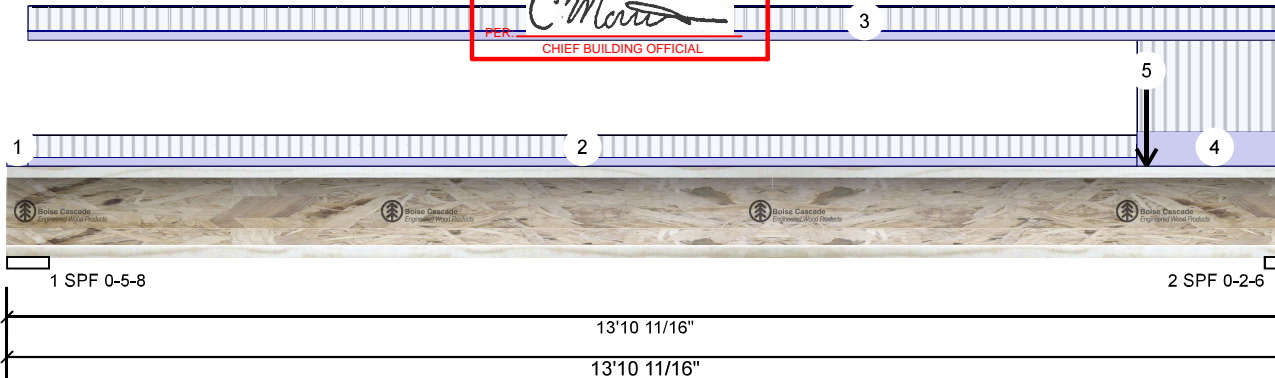
Client: GREENPARK GROUP
Project: ZADORA ESTATES
Address:

Date: 2023-07-17
Input by: K T
Job Name: VILLA 7-1,2,3
Project #: VILLA-1-1-3

Page 11 of 42

F13-D AJS 140 11.875" -**MHP 23037**

Level: Ground Floor

**Member Information**

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
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	270	101	0	0
2	Vertical	605	227	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	28%	126 / 405	531	L	1.25D+1.5L
2 - SPF	2.375"	Vert	71%	283 / 908	1191	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2007 ft-lb	8'2 5/8"	5305 ft-lb	0.378 (38%)	1.25D+1.5L	L
Unbraced	2007 ft-lb	8'2 5/8"	5305 ft-lb	0.378 (38%)	1.25D+1.5L	L
Shear	1169 lb	13'9 1/16"	2350 lb	0.497 (50%)	1.25D+1.5L	L
Perm Defl in.	0.046 (L/3483)	7'5"	0.445 (L/360)	0.103 (10%)	D	Uniform
LL Defl inch	0.123 (L/1306)	7'5"	0.445 (L/360)	0.276 (28%)	L	
TL Defl inch	0.169 (L/950)	7'5"	0.668 (L/240)	0.253 (25%)	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 12'4 7/8" o.c.



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 0-2-12	0-4-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-2-12 to 12-3-10	0-4-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-12 to 13-10-11	0-5-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	12-3-10 to 13-10-11	1-7-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	12-4-14		Far Face	127 lb	339 lb	0 lb	0 lb	F15

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

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

This design is valid until 2026-05-29

Manufacturer Info

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

Kott Inc.

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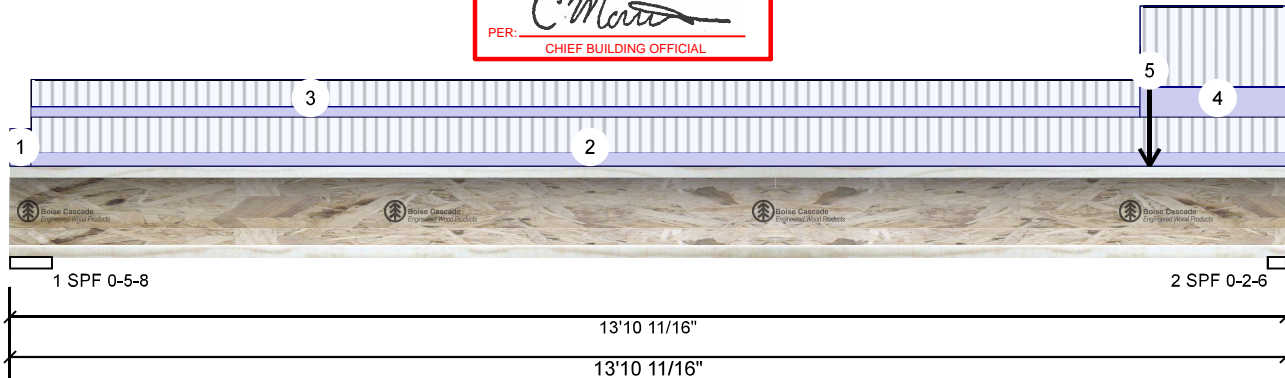
Client: GREENPARK GROUP
Project: ZADORA ESTATES
Address:

Date: 2023-07-17
Input by: K T
Job Name: VILLA 7-1,2,3
Project #: VILLA-1-1-13

Page 12 of 42

F13-E AJS 140 11.875" -**MHP 23037**

Level: Ground Floor

**Member Information**

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
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	381	143	0	0
2	Vertical	674	253	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	39%	179 / 571	750	L	1.25D+1.5L
2 - SPF	2.375"	Vert	79%	316 / 1010	1326	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2660 ft-lb	7'8 15/16"	5305 ft-lb	0.501 (50%)	1.25D+1.5L	L
Unbraced	2660 ft-lb	7'8 15/16"	5305 ft-lb	0.501 (50%)	1.25D+1.5L	L
Shear	1302 lb	13'9 1/16"	2350 lb	0.554 (55%)	1.25D+1.5L	L
Perm Defl in.	0.061 (L/2634)	7'3 9/16"	0.445 (L/360)	0.137 (14%)	D	Uniform
LL Defl inch	0.162 (L/988)	7'3 9/16"	0.445 (L/360)	0.365 (36%)	L	
TL Defl inch	0.223 (L/718)	7'3 9/16"	0.668 (L/240)	0.334 (33%)	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 12'4 7/8" 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 0-2-12	0-6-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-2-12 to 13-10-11	0-8-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-12 to 12-3-10	0-6-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	12-3-10 to 13-10-11	1-7-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	12-4-14		Near Face	112 lb	299 lb	0 lb	0 lb	F15

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

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

This design is valid until 2026-05-29

Manufacturer Info

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www.bc.com
CCMC: 12787

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





Client: GREENPARK GROUP
Project: ZADORA ESTATES
Address:

Date: 2023-07-17
Input by: K T
Job Name: VILLA 7-1 2 3
Project #: VILLA 7-1 2 3

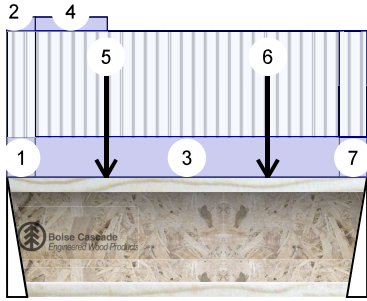
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MHP 23037

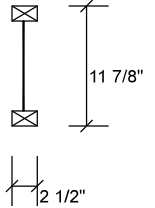
F15 AJS 140 11.875" - PASSED



Level: Ground Floor



1 Hanger (LF2511) 0-2-0
2 Hanger (LF2511) 0-2-0
2'11 5/8"
2'11 5/8"



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
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	237	97	0	0
2	Vertical	237	91	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	30%	121 / 355	476	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	29%	114 / 355	469	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	330 ft-lb	1'5 3/8"	5305 ft-lb	0.062 (6%)	1.25D+1.5L	L
Unbraced	330 ft-lb	1'5 3/8"	5305 ft-lb	0.062 (6%)	1.25D+1.5L	L
Shear	469 lb	1 1/4"	2350 lb	0.200 (20%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/26348)	1'5 1/8"	0.092 (L/360)	0.014 (1%)	D	Uniform
LL Defl inch	0.003 (L/10356)	1'5 13/16"	0.092 (L/360)	0.035 (3%)	L	L
TL Defl inch	0.004 (L/7435)	1'5 5/8"	0.138 (L/240)	0.032 (3%)	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.
- Left Header: SPF, Thickness: 2 1/2"
- Right Header: SPF, Thickness: 2 1/2"
- 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.



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 0-2-13	0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-2-13		Top	4 PLF	0 PLF	0 PLF	0 PLF	
3	Tie-In	0-2-13 to 2-8-14	0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Continued on page 2...

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-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.
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613-838-2775 / 905-642-4400



This design is valid until 2026-05-29



Client: GREENPARK GROUP
Project: ZADORRA ESTATES
Address:

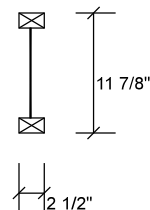
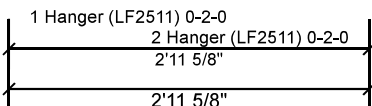
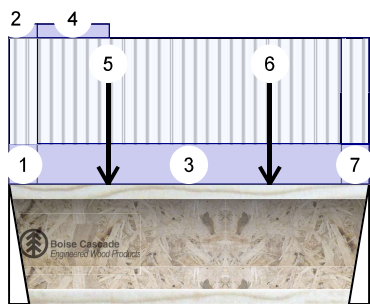
Date: 2023-07-17
Input by: K T
Job Name: VILLA 7-1 2 3
Project #: VILLA 7-1 2 3

F15 AJS 140 11.875" - PASSED

MHP 23037



Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	0-2-13 to 0-9-15		Top	4 PLF	0 PLF	0 PLF	0 PLF	
5	Point	0-9-13		Far Face	78 lb	191 lb	0 lb	0 lb	J3
6	Point	2-1-13		Far Face	72 lb	191 lb	0 lb	0 lb	J3
7	Tie-In	2-8-14 to 2-11-10	0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	



JULY 21, 2023

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Notes

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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
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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 GROUP
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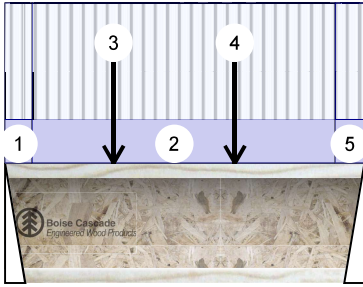
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MHP 23037

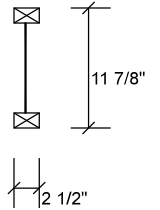
F15-A AJS 140 11.875" - PASSED



Level: Ground Floor



1 Hanger (LF2511) 0-2-0
2 Hanger (LF2511) 0-2-0
2'11 9/16"
2'11 9/16"



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 OBC 2012(2020 Update)
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	298	113	0	0
2	Vertical	275	105	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	37%	141 / 448	589	L	1.25D+1.5L
2 - Hanger	2.000"	Vert	34%	131 / 413	544	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	490 ft-lb	1'10 3/4"	5305 ft-lb	0.092 (9%)	1.25D+1.5L	L
Unbraced	490 ft-lb	1'10 3/4"	5305 ft-lb	0.092 (9%)	1.25D+1.5L	L
Shear	582 lb	1 1/4"	2350 lb	0.248 (25%)	1.25D+1.5L	L
Perm Defl in. (L/18782)	0.002	1'8 1/16"	0.092 (L/360)	0.019 (2%)	D	Uniform
LL Defl inch	0.005 (L/7130)	1'7 7/8"	0.092 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.006 (L/5168)	1'7 15/16"	0.138 (L/240)	0.046 (5%)	D+L	L



JULY 21, 2023

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.
- Left Header: SPF, Thickness: 2 1/2"
- Right Header: SPF, Thickness: 2 1/2"
- 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 0-2-11	0-9-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-2-11 to 2-8-11	0-9-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-10-12		Far Face	87 lb	231 lb	0 lb	0 lb	J9

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

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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CCMC: 12787

Kott Inc.

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This design is valid until 2026-05-29



Client: GREENPARK GROUP
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Address:

Date: 2023-07-17
Input by: K T
Job Name: VILLA 7-1 2 3
Project #: VILLA-1 2 3

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F15-A AJS 140 11.875" -

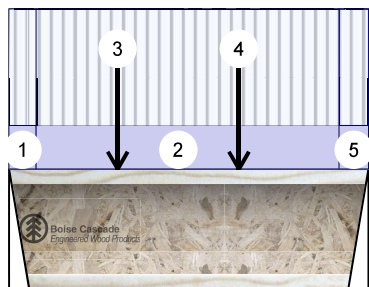
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OF PERMIT PLANS

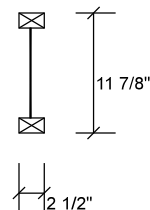
Nov 11 2023

PER: *C. Marro*
CHIEF BUILDING OFFICIAL

Level: Ground Floor



1 Hanger (LF2511) 0-2-0
2 Hanger (LF2511) 0-2-0
2'11 9/16"
2'11 9/16"



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Point	1-10-12		Far Face	96 lb	251 lb	0 lb	0 lb	J9
5	Tie-In	2-8-11 to 2-11-9	0-9-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	



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.

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 2026-05-29

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

