



## Engineering Notes: EWP-Floors



MHP 23029

PLEASE READ ALL NOTES PRIOR TO INSTALLATION OF THE COMPONENT

**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 23029

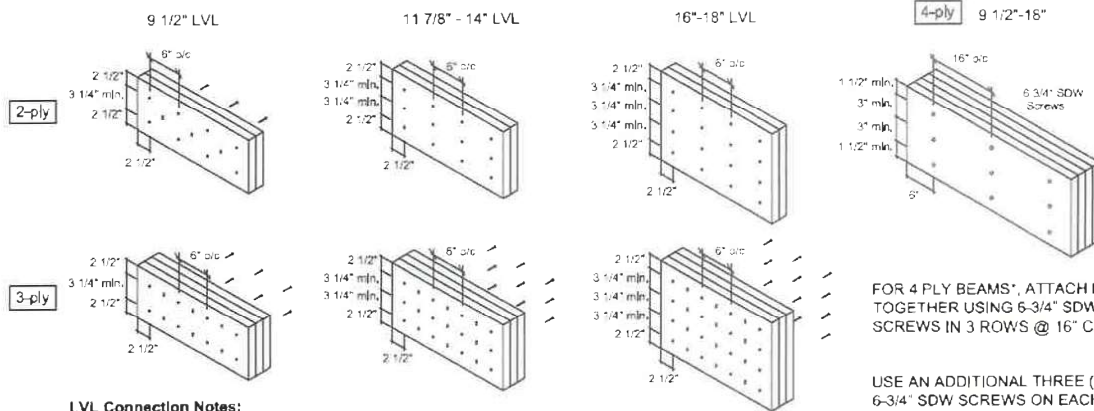
ENG-IM0723-070-KTF-GREENPARK-ZADORRA ESTATES-ROSE 3-3

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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 PLYS 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

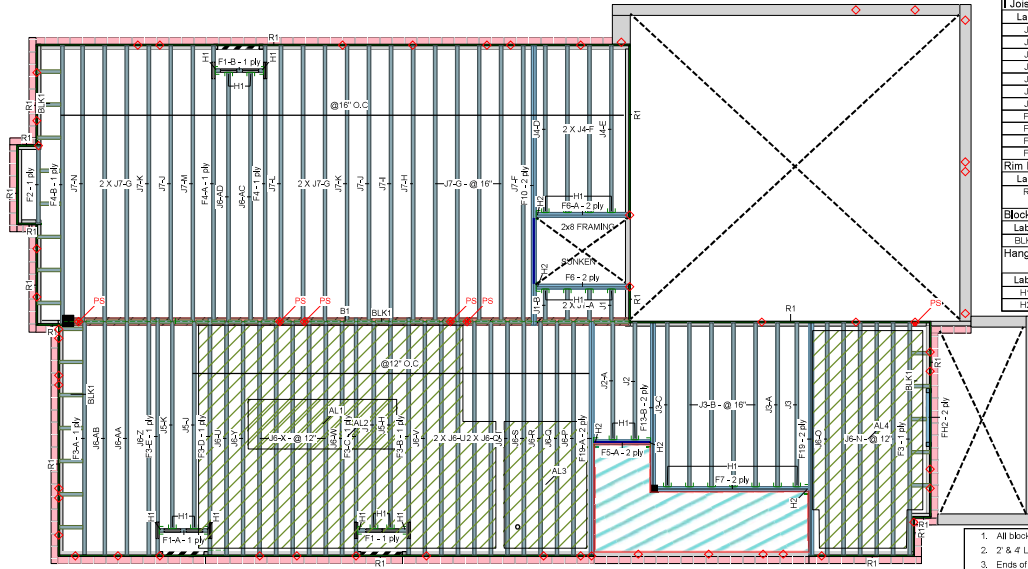
PER: *CMora*  
CHIEF BUILDING OFFICIAL

MHP 23029

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Ground Floor



Ground Floor  
LVL/LSL (Flush)

| Label | Description                   | Width | Depth  | Qty | Pies | Pcs | Length |
|-------|-------------------------------|-------|--------|-----|------|-----|--------|
| F10   | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 1   | 2    | 2   | 18-0   |
| F19   | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 2   | 2    | 4   | 16-0   |
| F13   | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 1   | 2    | 2   | 12-0   |
| F7    | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 1   | 2    | 2   | 10-0   |
| F8    | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 2   | 2    | 4   | 8-0    |
| F5    | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 1   | 2    | 2   | 4-0    |
| FH2   | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 1   | 2    | 2   | 4-0    |

Joist (Flush)

| Label | Description | Width | Depth  | Pcs | Length |
|-------|-------------|-------|--------|-----|--------|
| J7    | AJS 140     | 2.5   | 11.875 | 18  | 18-0   |
| J8    | AJS 140     | 2.5   | 11.875 | 28  | 16-0   |
| J5    | AJS 140     | 2.5   | 11.875 | 4   | 14-0   |
| J4    | AJS 140     | 2.5   | 11.875 | 4   | 12-0   |
| J3    | AJS 140     | 2.5   | 11.875 | 7   | 10-0   |
| J2    | AJS 140     | 2.5   | 11.875 | 2   | 8-0    |
| J1    | AJS 140     | 2.5   | 11.875 | 4   | 2-0    |
| F4    | AJS 140     | 2.5   | 11.875 | 3   | 18-0   |
| F3    | AJS 140     | 2.5   | 11.875 | 6   | 16-0   |
| F2    | AJS 140     | 2.5   | 11.875 | 1   | 8-0    |
| F1    | AJS 140     | 2.5   | 11.875 | 3   | 4-0    |

Rim Board

| Label | Description                             | Width | Depth  | Pcs | Length |
|-------|---|-------|--------|-----|--------|
| R1    | Norbord Rimboard Plus<br>1.125 X 11.875 | 1.125 | 11.875 | 13  | 12-0   |

Blocking

| Label | Description | Width | Depth  | Qty   | Pcs    | Length |
|-------|-------------|-------|--------|-------|--------|--------|
| BLK1  | AJS 140     | 2.5   | 11.875 | Unf/L | Varies | 53-0   |

Hanger

| Label | Pcs | Description | fasteners    | fasteners    |
|-------|-----|-------------|--------------|--------------|
| H1    | 29  | LF2511      | 12 10dX1 1/2 | 1 #8X1 1/4WS |
| H2    | 5   | LF3511      | 12 10d       | 2 #8X1 1/4WS |

JOB INFORMATION

|             |                               |
|-------------|-------------------------------|
| Builder     | GREENPARK                     |
| Project     | ZADORRA ESTATES<br>OSHAWA, ON |
| Shipping    | W.C.                          |
| Sales Rep   | RALPH MIRIGELLO               |
| Designer    | W.C.                          |
| Plotted     | July 12, 2023                 |
| Layout Name | ROSE 3-3 STD                  |

Job Path  
S:\CUSTOMERS\GREENPARK\ZADORRA ESTATES  
MODELS\ROSE 3-3\ROSE 3-3W-ROSE 3-3 STD.rvt

DESIGN CRITERIA

|               |                       |
|---------------|-----------------------|
| Ground Floor  | LSD (Canada)          |
| Design Method | NBCC 2015             |
| Bulking Code  | OBC 2012(2020 Update) |

Floor Loads

|      |    |
|------|----|
| Dead | 40 |
| Live | 15 |

Deflection Joist

|           |     |
|-----------|-----|
| LL Span / | 360 |
| TL Span / | 240 |

Deflection Flush Girder

|           |     |
|-----------|-----|
| LL Span / | 360 |
| TL Span / | 240 |

Deflection Dropped Girder

|           |     |
|-----------|-----|
| LL Span / | 360 |
| TL Span / | 240 |

Deflection Header

|           |     |
|-----------|-----|
| LL Span / | 360 |
| TL Span / | 240 |

Decking

|           |                |
|-----------|----------------|
| Decking   | OSB            |
| Thickness | 3/4"           |
| Fastener  | Nailed & Glued |

CCMC References

|                 |                    |
|-----------------|--------------------|
| Boise - 12472-R | 12787-R            |
| LP - 12412-R    | Roseburg - 13310-R |
| Forex - 14035-R |                    |

Kott Inc.

|                            |  |
|----------------------------|--|
| 3228 Wood Dr. Ottawa       |  |
| 14 Anderson Blvd. Unbridge |  |
| Ontario                    |  |

613-838-2775 /  
905-642-4400

KOTT

Installation Guide



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

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

1. All blocking to be cut from 12" joists
2. 2" & 4" Lengths to be cut from 8" Length, 6" lengths to be cut from 12" Length
3. Ends of joists to be laterally supported
4. Packing of Steel beams and attachment by others
5. Shower and water closet flange locations are approximate only; consult architectural drawing for exact locations
6. Beams identified as "B" are dropped and supplied by others
7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls
8. Load transfer blocks to be installed under all point loads
9. Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
10. Hangers and Fasteners to be installed as per manufacturer
11. Framing shown on this layout may deviate from architectural drawings. Arch / Eng to review and approve the deviation prior to construction.
12. Multi ply beams with side loading to have all fasteners installed with the head on the side of the applied load.
13. Confirmation of adequate support & anchorage of components is the responsibility of the building designer; suggested uplift connectors are as shown.
14. Where beam hangs on side of 3-ply member, it is recommended that the equivalent quantity and size of nails required for the hanger attachment also be installed on opposite side of the 3-ply member

Legend

|  |                    |
|--|--------------------|
| PS                                       | Point Load Support |
| Load from Above                          |                    |
| Wall                                     |                    |
| Wall Opening                             |                    |
| Norbord Rimboard Plus 1.125 X 11.875     |                    |
| AJS 140 11.875                           |                    |
| Versa-Lam LVL 2.1E 3100 SP 1.75 X 11.875 |                    |
| O X O (Dropped)                          |                    |

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Ground Floor

Ground Floor  
LVL/LSL (Flush)

| Label | Description                   | Width | Depth  | Qty | Pies | Pcs | Length |
|-------|-------------------------------|-------|--------|-----|------|-----|--------|
| F10   | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 1   | 2    | 2   | 18-0   |
| F19   | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 2   | 2    | 4   | 16-0   |
| F13   | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 1   | 2    | 2   | 12-0   |
| F7    | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 1   | 2    | 2   | 10-0   |
| F8    | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 2   | 2    | 4   | 8-0    |
| F5    | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 1   | 2    | 2   | 4-0    |
| FH2   | Versa-Lam LVL<br>2.1E 3100 SP | 1.75  | 11.875 | 1   | 2    | 2   | 4-0    |

Joist (Flush)

| Label | Description | Width | Depth  | Pcs | Length |
|-------|-------------|-------|--------|-----|--------|
| J7    | AJS 140     | 2.5   | 11.875 | 22  | 18-0   |
| J8    | AJS 140     | 2.5   | 11.875 | 29  | 16-0   |
| J5    | AJS 140     | 2.5   | 11.875 | 2   | 14-0   |
| J4    | AJS 140     | 2.5   | 11.875 | 4   | 12-0   |
| J3    | AJS 140     | 2.5   | 11.875 | 7   | 10-0   |
| J2    | AJS 140     | 2.5   | 11.875 | 2   | 8-0    |
| J1    | AJS 140     | 2.5   | 11.875 | 4   | 2-0    |
| F4    | AJS 140     | 2.5   | 11.875 | 1   | 18-0   |
| F3    | AJS 140     | 2.5   | 11.875 | 4   | 16-0   |
| F2    | AJS 140     | 2.5   | 11.875 | 1   | 6-0    |
| F1    | AJS 140     | 2.5   | 11.875 | 1   | 4-0    |

Rim Board

| Label | Description                             | Width | Depth  | Pcs | Length |
|-------|---|-------|--------|-----|--------|
| R1    | Norbord Rimboard Plus<br>1.125 X 11.875 | 1.125 | 11.875 | 13  | 12-0   |

Blocking

| Label | Description | Width | Depth  | Qty   | Pcs    | Length |
|-------|-------------|-------|--------|-------|--------|--------|
| BLK1  | AJS 140     | 2.5   | 11.875 | Unf/L | Varies | 54-0   |

Hanger

| Label | Pcs | Description | fasteners    | fasteners    |
|-------|-----|-------------|--------------|--------------|
| H1    | 21  | LP2511      | 12 10dX1 1/2 | 1 #8x1 1/4WS |
| H2    | 5   | LP3511      | 12 10d       | 2 #8x1 1/4WS |

JOB INFORMATION

|             |  |
|-------------|--|
| Builder     | GREENPARK  |
| Project     | ZADORRA ESTATES<br>OSHAWA, ON  |
| Shipping    |  |
| Sales Rep   | RALPH MIRIGELLO  |
| Designer    |  |
| Plotted     | July 12, 2023  |
| Layout Name | ROSE 3-3 WOC   |
| Job Path    | S:\CUSTOMER\GREENPARK\ZADORRA ESTATES<br>MODELS\ROSE 3\ROSE 3-3W-ROSE 3-3WOC<br>ROSE 3-3 WOC.dwg |

DESIGN CRITERIA

|               |                                    |
|---------------|------------------------------------|
| Ground Floor  |                                    |
| Design Method | LSD (Canada)                       |
| Bulking Code  | NBCC 2015<br>CBC 2012(2020 Update) |

Floor Loads

|      |    |
|------|----|
| Live | 40 |
| Dead | 15 |

Deflection Joist

|           |     |
|-----------|-----|
| LL Span / | 360 |
| TL Span / | 240 |

Deflection Flush Girder

|           |     |
|-----------|-----|
| LL Span / | 360 |
| TL Span / | 240 |

Deflection Dropped Girder

|           |     |
|-----------|-----|
| LL Span / | 360 |
| TL Span / | 240 |

Deflection Header

|           |     |
|-----------|-----|
| LL Span / | 360 |
| TL Span / | 240 |

Decking

|           |                |
|-----------|----------------|
| Decking   | OSB            |
| Thickness | 3/4"           |
| Fastener  | Nailed & Glued |

CCMC References

|                                  |
|----------------------------------|
| Boise - 12472-R, 12787-R         |
| LP - 12412-R, Roseburg - 13310-R |
| Forex - 14035-R                  |

Kott Inc.

|                            |
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| 3228 Wood Dr. Ottawa       |
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| Ontario                    |
| 613-838-2775 /             |
| 905-642-4400               |



Legend

|  |                    |
|--|--------------------|
| PS                                       | Point Load Support |
| Load from Above                          |                    |
| Wall                                     |                    |
| Well Opening                             |                    |
| Norbord Rimboard Plus 1.125 X 11.875     |                    |
| AJS 140 11.875                           |                    |
| Versa-Lam LVL 2.1E 3100 SP 1.75 X 11.875 |                    |
| O X O (Dropped)                          |                    |

Installation Guide



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additional load has been applied.  
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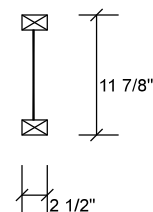
Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

PER: CHIEF BUILDING OFFICIAL

Level: Ground Floor

Level: Ground Floor

MHP 23029



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

### Unfactored Reactions UNPATTERNED lb (Uplift)

## Bearings and Factored Reactions

| Bearing       | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.  |
|---------------|--------|------|------|--------------|-------|----------|------------|
| 1 -<br>Hanger | 2.000" | Vert | 44%  | 245 / 463    | 708   | L        | 1.25D+1.5L |
| 2 -<br>Hanger | 2.000" | Vert | 44%  | 242 / 458    | 700   | L        | 1.25D+1.5L |

| Analysis      | Actual             | Location   | Allowed       | Capacity    | Comb.      | Case    |
|---------------|--------------------|------------|---------------|-------------|------------|---------|
| Moment        | 597 ft-lb          | 1'5 13/16" | 5305 ft-lb    | 0.113 (11%) | 1.25D+1.5L | L       |
| Unbraced      | 597 ft-lb          | 1'5 13/16" | 5305 ft-lb    | 0.113 (11%) | 1.25D+1.5L | L       |
| Shear         | 701 lb             | 1 1/4"     | 2350 lb       | 0.298 (30%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.003<br>(L/10538) | 1'5 13/16" | 0.092 (L/360) | 0.034 (3%)  | D          | Uniform |
| LL Defl inch  | 0.005 (L/6761)     | 1'5 13/16" | 0.092 (L/360) | 0.053 (5%)  | L          | L       |
| TL Defl inch  | 0.008 (L/4119)     | 1'5 13/16" | 0.138 (L/240) | 0.058 (6%)  | D+L        | L       |



JULY 13, 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.**

- 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 Left Header: SPF, Thickness: 2 1/2"
- 4 Right Header: SPF, Thickness: 2 1/2"
- 5 Girders are designed to be supported on the bottom edge only.
- 6 If sheathing is not attached to the top flange, top flange must be laterally braced at maximum 2' o.c.
- 7 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 2-11-11 | 0-9-4      | Top      | 15 PSF  | 40 PSF  | 0 PSF | 0 PSF |          |
| 2  | Part. Uniform | 0-0-0 to 2-11-11 |            | Top      | 4 PLF   | 0 PLF   | 0 PLF | 0 PLF |          |
| 3  | Part. Uniform | 0-5-12 to 2-5-12 |            | Far Face | 172 PLF | 261 PLF | 0 PLF | 0 PLF |          |

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.

## 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  $\geq 3.5$  inches
7. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

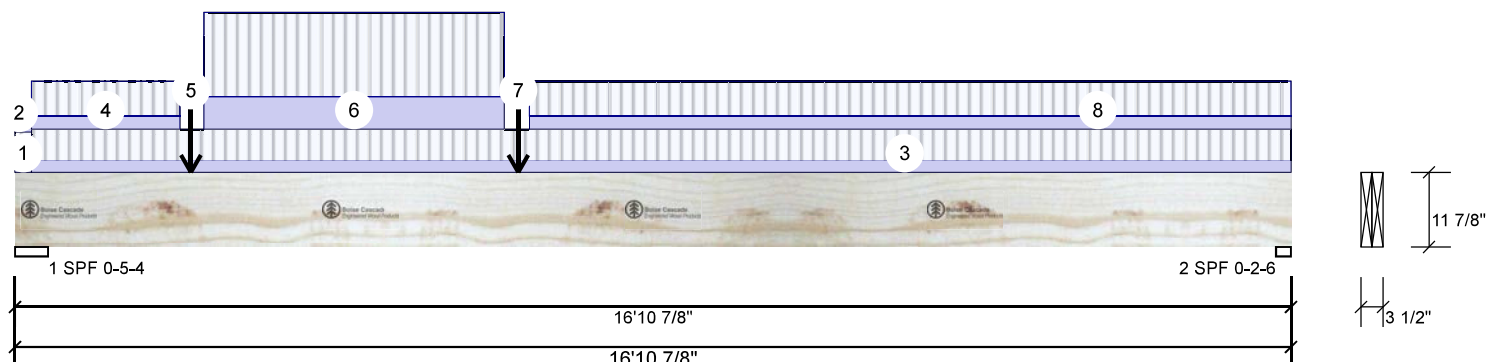
Boise Cascade Wood Products  
1111 W. Jefferson St.  
Boise, ID 83702  
(800) 232-0788  
www.bc.com  
CCMC: 12787

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



This design is valid until 4/17/2026

F10 Versa-Lam LVL 2.1E 3100 SP <sup>PER</sup> 11.80' X 11.875" 2-Ply <sup>CHIEF E.N. DIS OFFICIAL</sup> **PASSED** Level: Ground Floor



## Member Information

|                     |             |                |                                    |
|---------------------|-------------|----------------|------------------------------------|
| Type:               | Girder      | Application:   | Floor (Residential)                |
| Plies:              | 2           | Design Method: | LSD                                |
| Moisture Condition: | Dry         | Building Code: | NBCC 2015<br>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  | 687  | 409  | 0    | 0    |
| 2   | Vertical  | 451  | 285  | 0    | 0    |

## Bearings and Factored Reactions

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.  |
|---------|--------|------|------|--------------|-------|----------|------------|
| 1 - SPF | 5.250" | Vert | 14%  | 512 / 1031   | 1543  | L        | 1.25D+1.5L |
| 2 - SPF | 2.375" | Vert | 20%  | 356 / 677    | 1033  | L        | 1.25D+1.5L |

## Analysis Results

| Analysis      | Actual         | Location   | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|------------|---------------|-------------|------------|---------|
| Moment        | 6906 ft-lb     | 6'8"       | 35392 ft-lb   | 0.195 (20%) | 1.25D+1.5L | L       |
| Unbraced      | 6906 ft-lb     | 6'8"       | 35392 ft-lb   | 0.195 (20%) | 1.25D+1.5L | L       |
| Shear         | 1464 lb        | 1'5 1/8"   | 13217 lb      | 0.111 (11%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.074 (L/2641) | 8'2 11/16" | 0.546 (L/360) | 0.136 (14%) | D          | Uniform |
| LL Defl inch  | 0.131 (L/1506) | 8'1 11/16" | 0.546 (L/360) | 0.239 (24%) | L          | L       |
| TL Defl inch  | 0.205 (L/959)  | 8'2 1/16"  | 0.820 (L/240) | 0.250 (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 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be continuously laterally braced.
- 6 Bottom must be laterally braced at a maximum of 10'2 13/16" o.c.
- 7 Lateral slenderness ratio based on full section width.



JULY 13, 2023

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PAGE IS AN INTEGRAL PART OF THIS DRAWING  
AS IT CONTAINS SPECIFICATIONS AND CRITERIA  
USED IN THE DESIGN OF THIS COMPONENT.**

| ID | Load Type | Location           | Trib Width | Side      | Dead   | Live   | Snow  | Wind  | Comments |
|----|-----------|--------------------|------------|-----------|--------|--------|-------|-------|----------|
| 1  | Tie-In    | 0-0-0 to 0-2-10    | 0-3-9      | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 2  | Tie-In    | 0-0-0 to 0-2-10    | 0-2-7      | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 3  | Tie-In    | 0-2-10 to 16-10-14 | 0-3-13     | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 4  | Tie-In    | 0-2-10 to 2-2-3    | 0-4-3      | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 5  | Point     | 2-3-15             |            | Near Face | 70 lb  | 99 lb  | 0 lb  | 0 lb  | F6       |

Continued on page 2...

## Notes

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

## Lumber

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

## chemicals

## Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

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

|  |
|--|
| Kott Inc.<br>3228 Moodie Dr, Ottawa, Ontario |
|--|



This design is valid until 4/17/2026

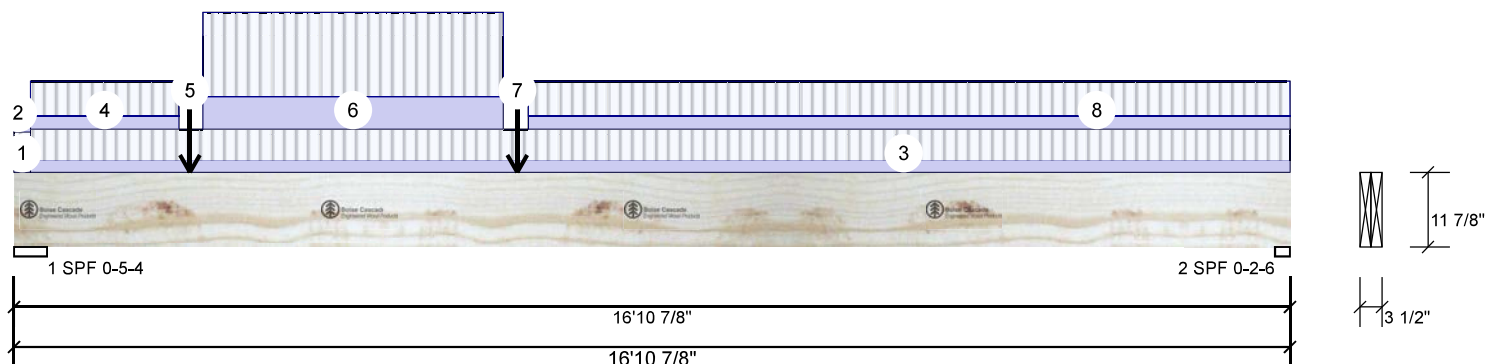


Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023

Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

Page 3 of 47

F10 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED Level: Ground Floor  
MHP 23029



...Continued from page 1

| ID | Load Type     | Location           | Trib Width | Side      | Dead   | Live   | Snow  | Wind  | Comments |
|----|---------------|--------------------|------------|-----------|--------|--------|-------|-------|----------|
| 6  | Part. Uniform | 2-6-1 to 6-5-13    |            | Top       | 13 PLF | 34 PLF | 0 PLF | 0 PLF |          |
| 7  | Point         | 6-8-0              |            | Near Face | 228 lb | 520 lb | 0 lb  | 0 lb  | F6       |
| 8  | Tie-In        | 6-9-12 to 16-10-14 | 0-4-3      | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
|    | Self Weight   |                    |            |           | 12 PLF |        |       |       |          |



JULY 13, 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
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**

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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 4/17/2026

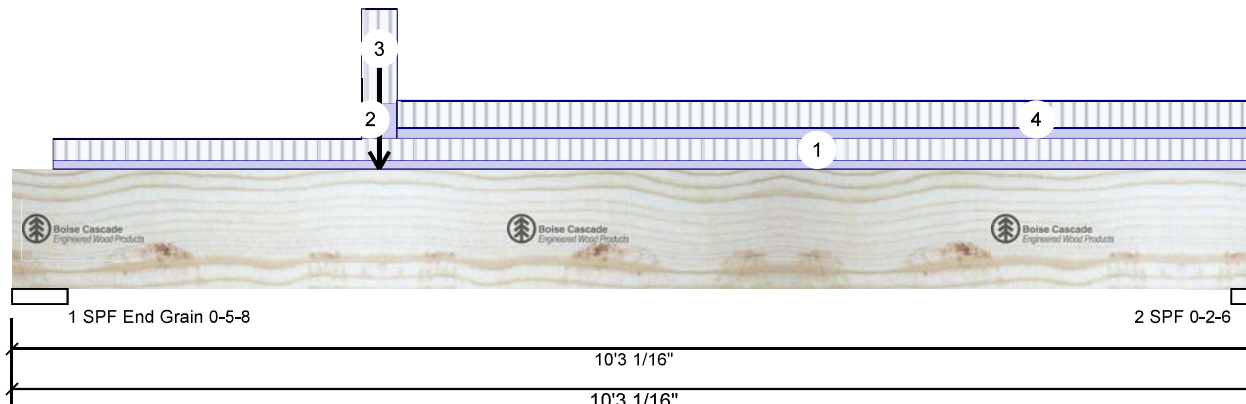


Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023

Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

|       |                            |                              |                  |       |        |                     |
|-------|----------------------------|------------------------------|------------------|-------|--------|---------------------|
| F13-B | Versa-Lam LVL 2.1E 3'00 SP | PER: CHIEF BUILDING OFFICIAL | 1.750" X 11.875" | 2-Ply | PASSED | Level: Ground Floor |
|-------|----------------------------|------------------------------|------------------|-------|--------|---------------------|

Level: Ground Floor



### Unfactored Reactions UNPATTERNED lb (Uplift)

|                     |             |                |                                    |
|---------------------|-------------|----------------|------------------------------------|
| Type:               | Girder      | Application:   | Floor (Residential)                |
| Plies:              | 2           | Design Method: | LSD                                |
| Moisture Condition: | Dry         | Building Code: | NBCC 2015<br>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      |                |                                    |

| Brg | Direction | Live | Dead | Snow | Wind |
|-----|-----------|------|------|------|------|
| 1   | Vertical  | 354  | 210  | 0    | 0    |
| 2   | Vertical  | 267  | 165  | 0    | 0    |

## Bearings and Factored Reactions

| Bearing                 | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.  |
|-------------------------|--------|------|------|--------------|-------|----------|------------|
| 1 - SPF<br>End<br>Grain | 5.500" | Vert | 4%   | 263 / 531    | 794   | L        | 1.25D+1.5L |
| 2 - SPF                 | 2.375" | Vert | 12%  | 206 / 401    | 607   | L        | 1.25D+1.5L |

## Analysis Results

| Analysis      | Actual             | Location | Allowed       | Capacity   | Comb.      | Case    |
|---------------|--------------------|----------|---------------|------------|------------|---------|
| Moment        | 1918 ft-lb         | 3'8"     | 35392 ft-lb   | 0.054 (5%) | 1.25D+1.5L | L       |
| Unbraced      | 1918 ft-lb         | 3'8"     | 35392 ft-lb   | 0.054 (5%) | 1.25D+1.5L | L       |
| Shear         | 749 lb             | 1'5 3/8" | 13217 lb      | 0.057 (6%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.008<br>(L/14317) | 5' 3/4"  | 0.324 (L/360) | 0.025 (3%) | D          | Uniform |
| LL Defl inch  | 0.014 (L/8271)     | 5' 1/8"  | 0.324 (L/360) | 0.044 (4%) | L          | L       |
| TL Defl inch  | 0.022 (L/5242)     | 5' 3/8"  | 0.486 (L/240) | 0.046 (5%) | D+L        | L       |



JULY 13, 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 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be continuously laterally braced.
- 6 Bottom must be laterally braced at a maximum of 7'2 11/16" o.c.
- 7 Lateral slenderness ratio based on full section width.

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| ID | Load Type   | Location         | Trib Width | Side     | Dead   | Live   | Snow  | Wind  | Comments |
|----|-------------|------------------|------------|----------|--------|--------|-------|-------|----------|
| 1  | Tie-In      | 0-4-1 to 10-3-1  | 0-5-4      | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 2  | Tie-In      | 2-10-10 to 3-2-2 | 1-10-5     | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 3  | Point       | 3-0-6            |            | Far Face | 123 lb | 272 lb | 0 lb  | 0 lb  | F5       |
| 4  | Tie-In      | 3-2-2 to 10-3-1  | 0-6-9      | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
|    | Self Weight |                  |            |          | 12 PLF |        |       |       |          |

## Notes

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**Lumber**

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

chemicals

## Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

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 4/17/2026



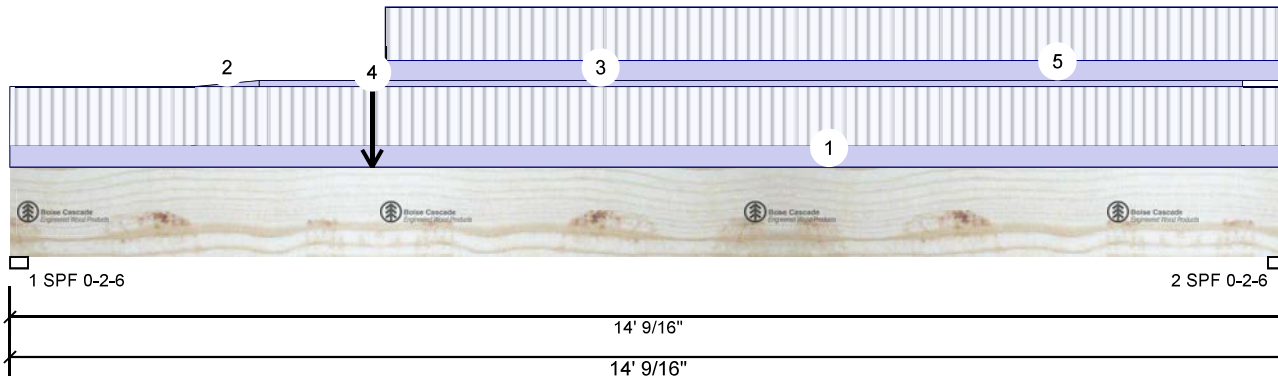


Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023  
PER: *C. Moore*  
100 SP 1750' X 11.87'

Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

F19 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED Level: Ground Floor

**Ply - PASSED** Level: Ground Floor  
**MHP 23029**



## Member Information

|                     |             |                |                                    |
|---------------------|-------------|----------------|------------------------------------|
| Type:               | Girder      | Application:   | Floor (Residential)                |
| Plies:              | 2           | Design Method: | LSD                                |
| Moisture Condition: | Dry         | Building Code: | NBCC 2015<br>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 Ib (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind |
|-----|-----------|------|------|------|------|
| 1   | Vertical  | 1074 | 535  | 0    | 0    |
| 2   | Vertical  | 588  | 332  | 0    | 0    |

## Bearings and Factored Reactions

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.  |
|---------|--------|------|------|--------------|-------|----------|------------|
| 1 - SPF | 2.375" | Vert | 45%  | 669 / 1611   | 2280  | L        | 1.25D+1.5L |
| 2 - SPF | 2.375" | Vert | 25%  | 415 / 883    | 1297  | L        | 1.25D+1.5L |

## Analysis Results

| Analysis      | Actual         | Location   | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|------------|---------------|-------------|------------|---------|
| Moment        | 8361 ft-lb     | 3'11 7/8"  | 35392 ft-lb   | 0.236 (24%) | 1.25D+1.5L | L       |
| Unbraced      | 8361 ft-lb     | 3'11 7/8"  | 35392 ft-lb   | 0.236 (24%) | 1.25D+1.5L | L       |
| Shear         | 2232 lb        | 1'2 1/4"   | 13217 lb      | 0.169 (17%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.057 (L/2914) | 6'6 11/16" | 0.459 (L/360) | 0.124 (12%) | D          | Uniform |
| LL Defl inch  | 0.112 (L/1474) | 6'5 1/2"   | 0.459 (L/360) | 0.244 (24%) | L          | L       |
| TL Defl inch  | 0.169 (L/979)  | 6'5 7/8"   | 0.689 (L/240) | 0.245 (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 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be continuously laterally braced.
- 6 Bottom must be laterally braced at a maximum of 10' 11/16" o.c.
- 7 Lateral slenderness ratio based on full section width.



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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 14-0-9   | 0-5-12     | Top      | 15 PSF | 40 PSF  | 0 PSF | 0 PSF |          |
| 2  | Tapered Start | 2-0-7             |            | Top      | 0 PLF  | 0 PLF   | 0 PLF | 0 PLF |          |
|    | End           | 2-8-15            |            |          | 2 PLF  | 0 PLF   | 0 PLF | 0 PLF |          |
| 3  | Part. Uniform | 2-8-15 to 13-6-13 |            | Top      | 2 PLF  | 0 PLF   | 0 PLF | 0 PLF |          |
| 4  | Point         | 3-11-14           |            | Far Face | 512 lb | 1220 lb | 0 lb  | 0 lb  | F7       |

Continued on page 2...

## Notes

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**Lumber**

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

## chemicals

## Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

|                   |
|-------------------|
| Manufacturer Info |
|-------------------|

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

|  |
|--|
| Kott Inc.<br>3228 Moodie Dr, Ottawa, Ontario |
|--|



This design is valid until 4/17/2026

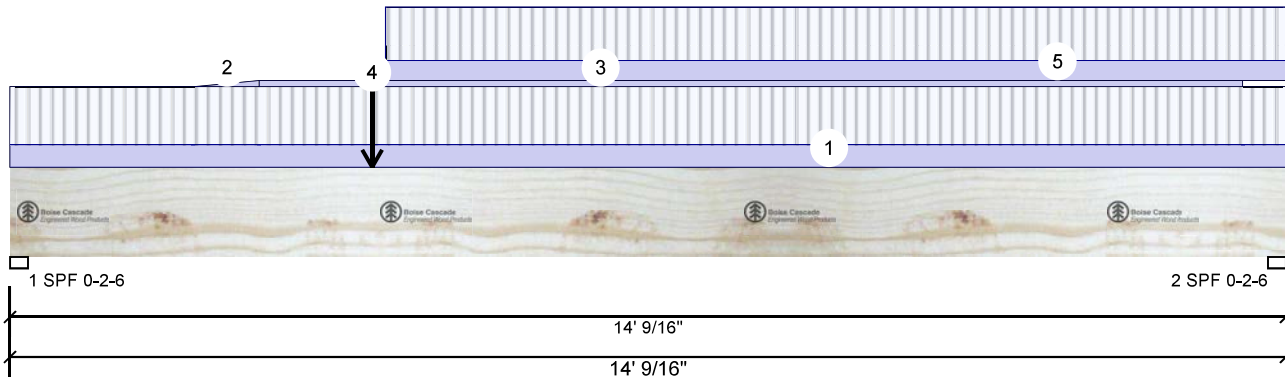


Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023  
ES

Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

Page 6 of 47

F19 Versa-Lam LVL 2.1E 3100 SP 1.750" X 11.875" 2-Ply - PASSED Level: Ground Floor  
MHP 23029



...Continued from page 1

| ID | Load Type   | Location         | Trib Width | Side | Dead   | Live   | Snow  | Wind  | Comments |
|----|-------------|------------------|------------|------|--------|--------|-------|-------|----------|
| 5  | Tie-In      | 4-1-10 to 14-0-9 | 0-5-4      | Top  | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
|    | Self Weight |                  |            |      | 12 PLF |        |       |       |          |



JULY 13, 2023

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**Notes**

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**Lumber**

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

chemicals

**Handling & Installation**

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

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(800) 232-0788  
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CCMC: 12472

This design is valid until 4/17/2026

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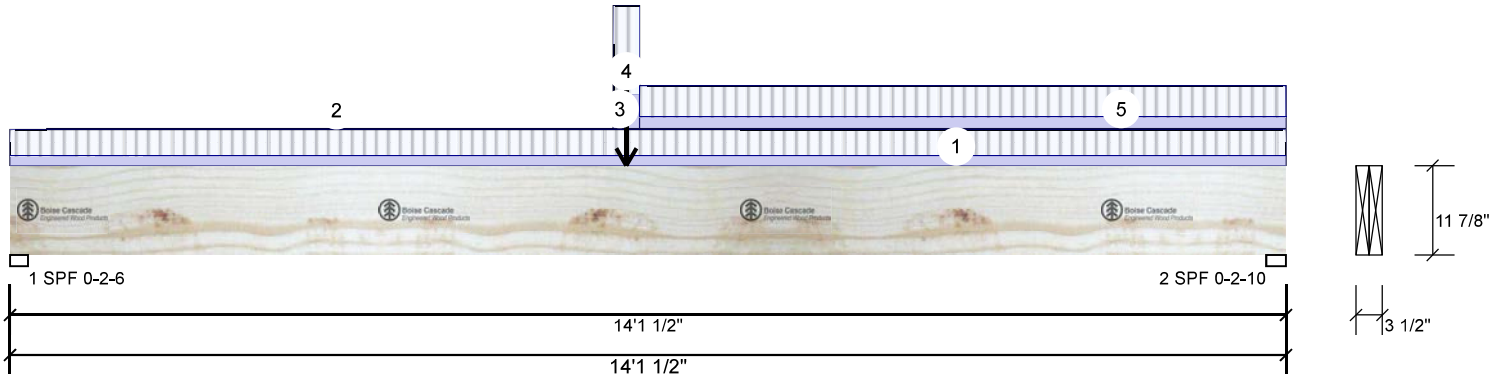


Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023  
ESDate: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

Page 7 of 47

F19-A Versa-Lam LVL 2.1E 3'10" SP 1750" X 11.875" 2-Ply - PASSED Level: Ground Floor

MHP 23029



## Member Information

|                     |             |                |                                    |
|---------------------|-------------|----------------|------------------------------------|
| Type:               | Girder      | Application:   | Floor (Residential)                |
| Plies:              | 2           | Design Method: | LSD                                |
| Moisture Condition: | Dry         | Building Code: | NBCC 2015<br>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  | 343  | 228  | 0    | 0    |
| 2   | Vertical  | 428  | 257  | 0    | 0    |

## Bearings and Factored Reactions

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.  |
|---------|--------|------|------|--------------|-------|----------|------------|
| 1 - SPF | 2.375" | Vert | 16%  | 285 / 515    | 800   | L        | 1.25D+1.5L |
| 2 - SPF | 2.625" | Vert | 17%  | 321 / 642    | 962   | L        | 1.25D+1.5L |

## Analysis Results

| Analysis      | Actual         | Location  | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|-----------|---------------|-------------|------------|---------|
| Moment        | 3979 ft-lb     | 6'9 7/8"  | 35392 ft-lb   | 0.112 (11%) | 1.25D+1.5L | L       |
| Unbraced      | 3979 ft-lb     | 6'9 7/8"  | 35392 ft-lb   | 0.112 (11%) | 1.25D+1.5L | L       |
| Shear         | 846 lb         | 12'11"    | 13217 lb      | 0.064 (6%)  | 1.25D+1.5L | L       |
| Perm Defl in. | 0.032 (L/5120) | 7' 15/16" | 0.461 (L/360) | 0.070 (7%)  | D          | Uniform |
| LL Defl inch  | 0.054 (L/3055) | 7'1 1/4"  | 0.461 (L/360) | 0.118 (12%) | L          | L       |
| TL Defl inch  | 0.087 (L/1913) | 7'1 1/8"  | 0.692 (L/240) | 0.125 (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 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be continuously laterally braced.
- 6 Bottom must be laterally braced at a maximum of 7'3 5/8" o.c.
- 7 Lateral slenderness ratio based on full section width.



JULY 13, 2023

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| ID | Load Type     | Location          | Trib Width | Side      | Dead   | Live   | Snow  | Wind  | Comments |
|----|---------------|-------------------|------------|-----------|--------|--------|-------|-------|----------|
| 1  | Tie-In        | 0-0-0 to 14-1-8   | 0-6-9      | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 2  | Part. Uniform | 0-4-14 to 8-0-15  |            | Top       | 1 PLF  | 0 PLF  | 0 PLF | 0 PLF |          |
| 3  | Tie-In        | 6-8-2 to 6-11-10  | 1-10-5     | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 4  | Point         | 6-9-14            |            | Near Face | 117 lb | 256 lb | 0 lb  | 0 lb  | F5       |
| 5  | Tie-In        | 6-11-10 to 14-1-8 | 0-7-12     | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
|    | Self Weight   |                   |            |           | 12 PLF |        |       |       |          |

## 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 &amp; 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

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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



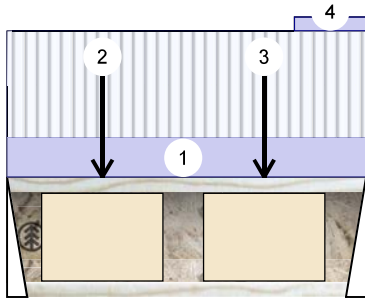
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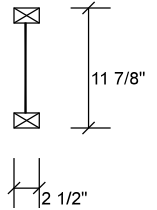
Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023  
PER: C. Mann  
375" - PASSED

Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

F1-A    AJS 140    11.875" **PASSED** PER: [Signature] DATE: 05/13/2019 Level: Ground Floor **MHP 23029**



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<br>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 Ib (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind |
|-----|-----------|------|------|------|------|
| 1   | Vertical  | 331  | 126  | 0    | 0    |
| 2   | Vertical  | 323  | 128  | 0    | 0    |

## Bearings and Factored Reactions

| Bearing       | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.  |
|---------------|--------|------|------|--------------|-------|----------|------------|
| 1 -<br>Hanger | 2.000" | Vert | 41%  | 157 / 497    | 654   | L        | 1.25D+1.5L |
| 2 -<br>Hanger | 2.000" | Vert | 40%  | 160 / 484    | 644   | L        | 1.25D+1.5L |

## Analysis Results

| Analysis      | Actual             | Location  | Allowed       | Capacity    | Comb.      | Case    |
|---------------|--------------------|-----------|---------------|-------------|------------|---------|
| Moment        | 457 ft-lb          | 1'9 3/16" | 5305 ft-lb    | 0.086 (9%)  | 1.25D+1.5L | L       |
| Unbraced      | 457 ft-lb          | 1'9 3/16" | 5305 ft-lb    | 0.086 (9%)  | 1.25D+1.5L | L       |
| Shear         | 647 lb             | 1 1/4"    | 2350 lb       | 0.275 (28%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.002<br>(L/19337) | 1'7 1/16" | 0.092 (L/360) | 0.019 (2%)  | D          | Uniform |
| LL Defl inch  | 0.004 (L/7467)     | 1'6 9/16" | 0.092 (L/360) | 0.048 (5%)  | L          | L       |
| TL Defl inch  | 0.006 (L/5387)     | 1'6 3/4"  | 0.138 (L/240) | 0.045 (4%)  | D+L        | L       |

## Design Notes

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



JULY 13, 2023

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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 2-11-9 | 0-9-4      | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 2  | Point         |                 | 0-9-7      | Far Face | 104 lb | 278 lb | 0 lb  | 0 lb  | J5       |
| 3  | Point         |                 | 2-1-7      | Far Face | 113 lb | 285 lb | 0 lb  | 0 lb  | J5       |
| 4  | Part. Uniform | 2-4-7 to 2-11-9 |            | Top      | 4 PLF  | 0 PLF  | 0 PLF | 0 PLF |          |

## 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  $\geq 3.5$  inches
7. For flat roofs provide proper drainage to prevent ponding

|                   |
|-------------------|
| 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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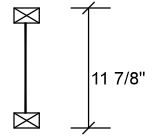
This design is valid until 4/17/2026





Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

Level: Ground Floor



| Brg | Direction | Live | Dead | Snow | Wind |
|-----|-----------|------|------|------|------|
| 1   | Vertical  | 377  | 142  | 0    | 0    |
| 2   | Vertical  | 383  | 144  | 0    | 0    |

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- 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 Left Header: SPF, Thickness: 2 1/2"
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- 7 If sheathing is not attached to the bottom flange, bottom flange must be laterally braced at maximum 2' o.c.





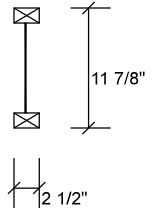
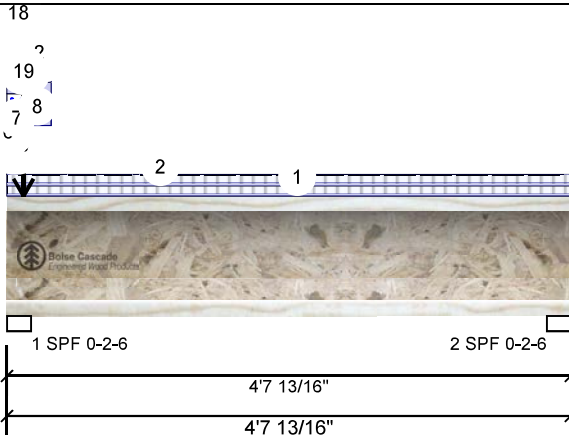
Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023  
PER: C. Martin  
5' - PASSED OFFICIAL

Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

**F2 AJS 140 11.875**

Level: Ground Floor

MHP 23029



## Member Information

|                     |             |                |                                    |
|---------------------|-------------|----------------|------------------------------------|
| Type:               | Girder      | Application:   | Floor (Residential)                |
| Plies:              | 1           | Design Method: | LSD                                |
| Moisture Condition: | Dry         | Building Code: | NBCC 2015<br>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 Ib (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind |
|-----|-----------|------|------|------|------|
| 1   | Vertical  | 188  | 489  | 382  | 0    |
| 2   | Vertical  | 126  | 48   | 0    | 0    |

## Bearings and Factored Reactions

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.        |
|---------|--------|------|------|--------------|-------|----------|------------------|
| 1 - SPF | 2.375" | Vert | 82%  | 611 / 762    | 1373  | L        | 1.25D+1.5S<br>+L |
| 2 - SPF | 2.375" | Vert | 17%  | 60 / 189     | 249   | L        | 1.25D+1.5L       |

## Analysis Results

| Analysis      | Actual             | Location  | Allowed       | Capacity    | Comb.      | Case    |
|---------------|--------------------|-----------|---------------|-------------|------------|---------|
| Moment        | 259 ft-lb          | 2'3 3/4"  | 4668 ft-lb    | 0.055 (6%)  | 1.25D+1.5L | L       |
| Unbraced      | 259 ft-lb          | 2'3 3/4"  | 4668 ft-lb    | 0.055 (6%)  | 1.25D+1.5L | L       |
| Shear         | 282 lb             | 1 5/8"    | 2068 lb       | 0.136 (14%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.001<br>(L/40201) | 2'3 9/16" | 0.146 (L/360) | 0.009 (1%)  | D          | Uniform |
| LL Defl inch  | 0.003<br>(L/15680) | 2'3 7/8"  | 0.146 (L/360) | 0.023 (2%)  | L+0.5S     | L       |
| TL Defl inch  | 0.005<br>(L/11281) | 2'3 3/4"  | 0.219 (L/240) | 0.021 (2%)  | D+L+0.5S   | L       |



JULY 13, 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 Bottom flange must be laterally braced at bearings.

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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 4-7-13 | 0-7-9      | Top  | 15 PSF | 40 PSF | 0 PSF  | 0 PSF |                  |
| 2  | Tie-In        | 0-0-0 to 4-7-13 | 0-8-11     | Top  | 15 PSF | 40 PSF | 0 PSF  | 0 PSF |                  |
| 3  | Part. Uniform | 0-0-0 to 0-1-2  |            | Top  | 15 PLF | 0 PLF  | 40 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  | 6 PLF  | 0 PLF  | 0 PLF |                  |

Continued on page 2...

## Notes

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**Lumber**

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

## chemicals

## Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists 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  $\geq 3.5$  inches
7. For flat roofs provide proper drainage to prevent ponding

|                   |
|-------------------|
| Manufacturer Info |
|-------------------|

Boise Cascade Wood Products  
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(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 4/17/2026

Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

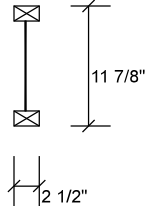
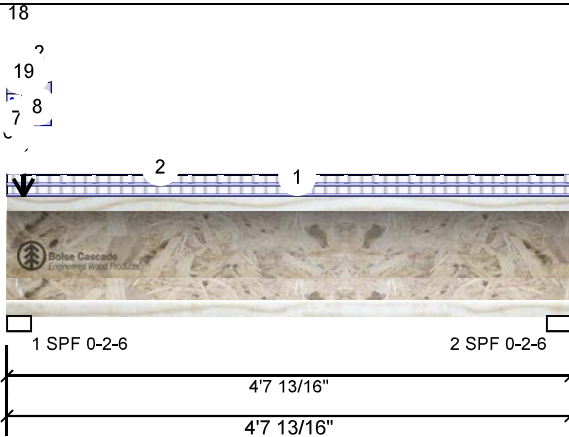
Page 11 of 47

F2 AJS 140 11.875'

PER:   
PASSED OFFICIAL

Level: Ground Floor

MHP 23029



...Continued from page 1

| ID | Load Type      | Location       | Trib Width | Side | Dead   | Live   | Snow   | Wind  | Comments              |
|----|----------------|----------------|------------|------|--------|--------|--------|-------|-----------------------|
|    | End            | 0-1-2          |            |      | 2 PLF  | 6 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  | 30 PLF | 0 PLF  | 80 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  | 5 PLF  | 13 PLF | 0 PLF  | 0 PLF |                       |
|    | End            | 0-4-6          |            |      | 5 PLF  | 13 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 | Tapered Start  | 0-1-2          |            | Top  | 5 PLF  | 13 PLF | 0 PLF  | 0 PLF |                       |
|    | End            | 0-1-2          |            |      | 5 PLF  | 13 PLF | 0 PLF  | 0 PLF |                       |
| 14 | Part. Uniform  | 0-1-2 to 0-1-2 |            | Top  | 2 PLF  | 0 PLF  | 0 PLF  | 0 PLF | Rim Board Self Weight |
| 15 | Part. Uniform  | 0-1-2 to 0-1-2 |            | Top  | 30 PLF | 0 PLF  | 80 PLF | 0 PLF |                       |
| 16 | Part. Uniform  | 0-1-2 to 0-1-2 |            | Top  | 40 PLF | 0 PLF  | 0 PLF  | 0 PLF | Wall Self Weight      |
| 17 | Tapered Start  | 0-1-2          |            | Top  | 5 PLF  | 13 PLF | 0 PLF  | 0 PLF |                       |
|    | End            | 0-1-2          |            |      | 5 PLF  | 13 PLF | 0 PLF  | 0 PLF |                       |
| 18 | Part. Uniform  | 0-1-2 to 0-1-2 |            | Top  | 2 PLF  | 0 PLF  | 0 PLF  | 0 PLF | Rim Board Self Weight |
| 19 | Point          | 0-1-10         |            | Top  | 378 lb | 57 lb  | 350 lb | 0 lb  | B2                    |
|    | Bearing Length | 0-1-8          |            |      |        |        |        |       |                       |

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JULY 13, 2023

**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 4/17/2026





Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

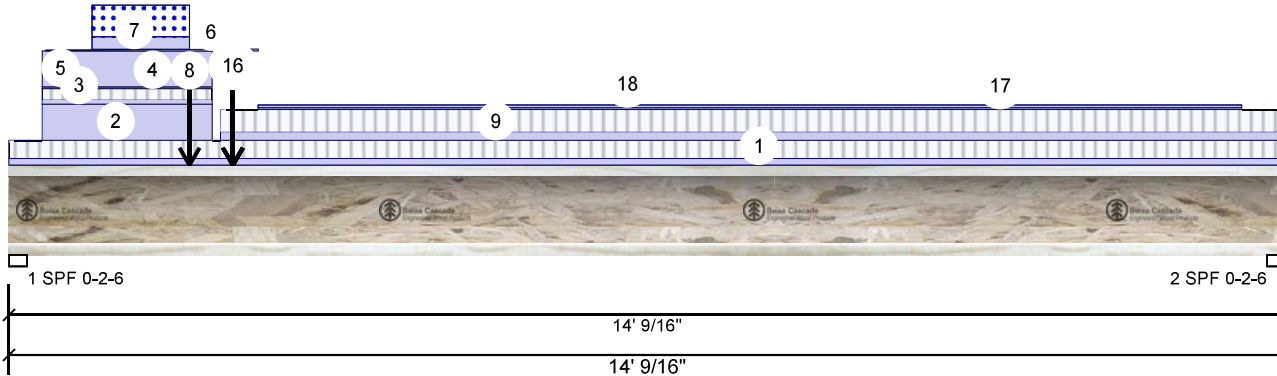
Page 13 of 47

F3 AJS 140 11.875'

PER: *C. Mott*  
PASSED OFFICIAL

MHP 23029

Level: Ground Floor



...Continued from page 1

| ID | Load Type      | Location          | Trib Width | Side | Dead   | Live   | Snow   | Wind  | Comments              |
|----|----------------|-------------------|------------|------|--------|--------|--------|-------|-----------------------|
| 5  | Part. Uniform  | 0-4-6 to 2-2-13   |            | Top  | 40 PLF | 0 PLF  | 0 PLF  | 0 PLF | Wall Self Weight      |
| 6  | Tapered Start  | 0-4-14            |            | Top  | 1 PLF  | 0 PLF  | 0 PLF  | 0 PLF |                       |
|    | End            | 2-8-15            |            |      | 2 PLF  | 0 PLF  | 0 PLF  | 0 PLF |                       |
| 7  | Part. Uniform  | 0-11-0 to 1-11-14 |            | Top  | 14 PLF | 0 PLF  | 35 PLF | 0 PLF |                       |
| 8  | Point          | 1-11-14           |            | Top  | 45 lb  | 0 lb   | 88 lb  | 0 lb  | F14                   |
|    | Bearing Length | 0-3-8             |            |      |        |        |        |       |                       |
| 9  | Tie-In         | 2-3-15 to 14-0-9  | 0-7-7      | Top  | 15 PSF | 40 PSF | 0 PSF  | 0 PSF |                       |
| 11 | Point          | 2-5-9             |            | Top  | 1 lb   | 0 lb   | 0 lb   | 0 lb  | Rim Board Self Weight |
|    | Bearing Length | 0-3-8             |            |      |        |        |        |       |                       |
| 12 | Point          | 2-5-9             |            | Top  | 18 lb  | 47 lb  | 0 lb   | 0 lb  | J4                    |
|    | Bearing Length | 0-3-8             |            |      |        |        |        |       |                       |
| 13 | Point          | 2-5-9             |            | Top  | 17 lb  | 0 lb   | 0 lb   | 0 lb  | Wall Self Weight      |
|    | Bearing Length | 0-3-8             |            |      |        |        |        |       |                       |
| 14 | Point          | 2-5-9             |            | Top  | 17 lb  | 0 lb   | 0 lb   | 0 lb  | Wall Self Weight      |
|    | Bearing Length | 0-3-8             |            |      |        |        |        |       |                       |
| 15 | Point          | 2-5-9             |            | Top  | 30 lb  | 81 lb  | 0 lb   | 0 lb  | J4                    |
|    | Bearing Length | 0-3-8             |            |      |        |        |        |       |                       |
| 16 | Point          | 2-5-9             |            | Top  | 29 lb  | 0 lb   | 0 lb   | 0 lb  | Wall Self Weight      |
|    | Bearing Length | 0-3-8             |            |      |        |        |        |       |                       |
| 17 | Part. Uniform  | 2-8-15 to 13-6-13 |            | Top  | 2 PLF  | 0 PLF  | 0 PLF  | 0 PLF |                       |
| 18 | Part. Uniform  | 2-8-15 to 13-6-13 |            | Top  | 3 PLF  | 0 PLF  | 0 PLF  | 0 PLF |                       |

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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 &amp; Installation

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4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

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6. Web stiffeners for point load as shown Minimum point load bearing length >= 3.5 inches
7. For flat roofs provide proper drainage to prevent ponding

## Manufacturer Info

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

This design is valid until 4/17/2026

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



Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023  
ESDate: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

Page 14 of 47

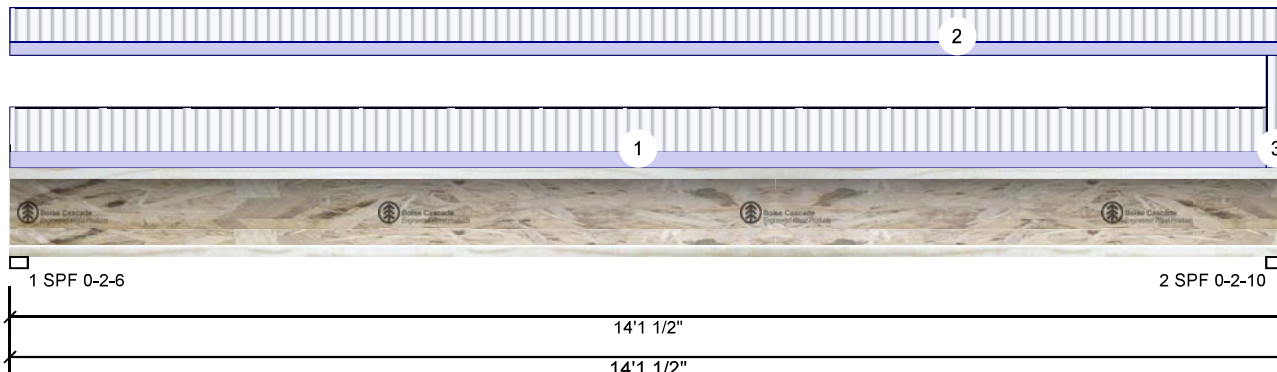
F3-A AJS 140

11.875"

PASSED

MHP 23029

Level: Ground Floor



## Member Information

|                     |             |                |                                    |
|---------------------|-------------|----------------|------------------------------------|
| Type:               | Girder      | Application:   | Floor (Residential)                |
| Plies:              | 1           | Design Method: | LSD                                |
| Moisture Condition: | Dry         | Building Code: | NBCC 2015<br>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  | 393  | 147  | 0    | 0    |
| 2   | Vertical  | 400  | 150  | 0    | 0    |

## Bearings and Factored Reactions

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.  |
|---------|--------|------|------|--------------|-------|----------|------------|
| 1 - SPF | 2.375" | Vert | 46%  | 184 / 589    | 773   | L        | 1.25D+1.5L |
| 2 - SPF | 2.625" | Vert | 45%  | 187 / 600    | 787   | L        | 1.25D+1.5L |

## Analysis Results

| Analysis      | Actual         | Location   | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|------------|---------------|-------------|------------|---------|
| Moment        | 2623 ft-lb     | 7' 5/8"    | 5305 ft-lb    | 0.495 (49%) | 1.25D+1.5L | L       |
| Unbraced      | 2623 ft-lb     | 7' 5/8"    | 5305 ft-lb    | 0.495 (49%) | 1.25D+1.5L | L       |
| Shear         | 762 lb         | 13'11 5/8" | 2350 lb       | 0.324 (32%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.063 (L/2651) | 7' 5/8"    | 0.461 (L/360) | 0.136 (14%) | D          | Uniform |
| LL Defl inch  | 0.167 (L/994)  | 7' 5/8"    | 0.461 (L/360) | 0.362 (36%) | L          |         |
| TL Defl inch  | 0.230 (L/723)  | 7' 5/8"    | 0.692 (L/240) | 0.332 (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 bearings.



JULY 13, 2023

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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 13-10-14  | 0-9-5      | Top  | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 2  | Tie-In    | 0-0-0 to 14-1-8    | 0-7-6      | Top  | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 3  | Tie-In    | 13-10-14 to 14-1-8 | 1-5-5      | 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 &amp; 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 4/17/2026

## 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

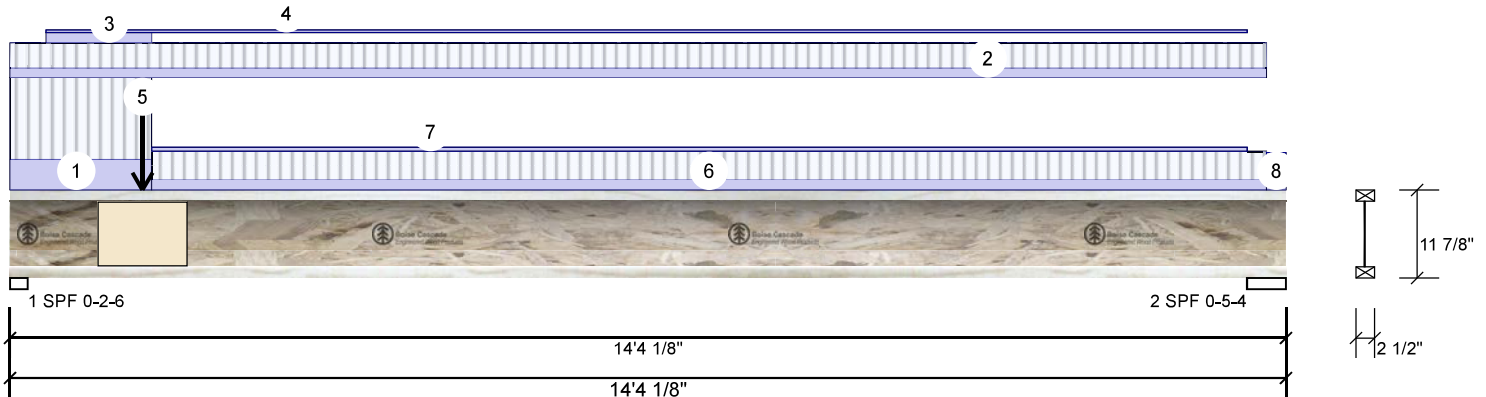




Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023  
PER: C. Mann  
375" - PASSED

Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

**F3-B**   **AJS 140**   **11.875"** **PASSED**   **MHP 23029**   Level: Ground Floor



## Member Information

|                     |             |                |                                    |
|---------------------|-------------|----------------|------------------------------------|
| Type:               | Girder      | Application:   | Floor (Residential)                |
| Plies:              | 1           | Design Method: | LSD                                |
| Moisture Condition: | Dry         | Building Code: | NBCC 2015<br>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 Ib (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind |
|-----|-----------|------|------|------|------|
| 1   | Vertical  | 632  | 348  | 0    | 0    |
| 2   | Vertical  | 332  | 167  | 0    | 0    |

## Bearings and Factored Reactions

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.  |
|---------|--------|------|------|--------------|-------|----------|------------|
| 1 - SPF | 2.375" | Vert | 82%  | 435 / 948    | 1383  | L        | 1.25D+1.5L |
| 2 - SPF | 5.250" | Vert | 37%  | 209 / 498    | 707   | L        | 1.25D+1.5L |

## Analysis Results

| Analysis      | Actual         | Location   | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|------------|---------------|-------------|------------|---------|
| Moment        | 2664 ft-lb     | 6'2 3/8"   | 5305 ft-lb    | 0.502 (50%) | 1.25D+1.5L | L       |
| Unbraced      | 2664 ft-lb     | 6'2 3/8"   | 5305 ft-lb    | 0.502 (50%) | 1.25D+1.5L | L       |
| Shear         | 1361 lb        | 1 5/8"     | 2350 lb       | 0.579 (58%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.083 (L/2007) | 6'8 15/16" | 0.461 (L/360) | 0.179 (18%) | D          | Uniform |
| LL Defl inch  | 0.158 (L/1048) | 6'9 5/8"   | 0.461 (L/360) | 0.344 (34%) | L          | L       |
| TL Defl inch  | 0.241 (L/688)  | 6'9 3/8"   | 0.692 (L/240) | 0.349 (35%) | D+L        | L       |



JULY 13, 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 Bottom flange must be laterally braced at a maximum of 12'10 1/4" 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 1-7-2     | 1-7-1      | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 2  | Tie-In        | 0-0-0 to 14-1-8    | 0-5-14     | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 3  | Part. Uniform | 0-4-14 to 1-7-2    |            | Top      | 8 PLF  | 0 PLF  | 0 PLF | 0 PLF |          |
| 4  | Part. Uniform | 0-4-14 to 13-10-14 |            | Top      | 2 PLF  | 0 PLF  | 0 PLF | 0 PLF |          |
| 5  | Point         | 1-5-14             |            | Far Face | 194 lb | 305 lb | 0 lb  | 0 lb  | F1       |
| 6  | Tie-In        | 1-7-2 to 14-1-8    | 0-6-10     | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 7  | Part. Uniform | 1-7-2 to 13-10-14  |            | Top      | 3 PLF  | 0 PLF  | 0 PLF | 0 PLF |          |
| 8  | Tie-In        | 14-1-8 to 14-4-2   | 0-6-5      | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |

## 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  $\geq 3.5$  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 4/17/2026





Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023  
ES

Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

Page 17 of 47

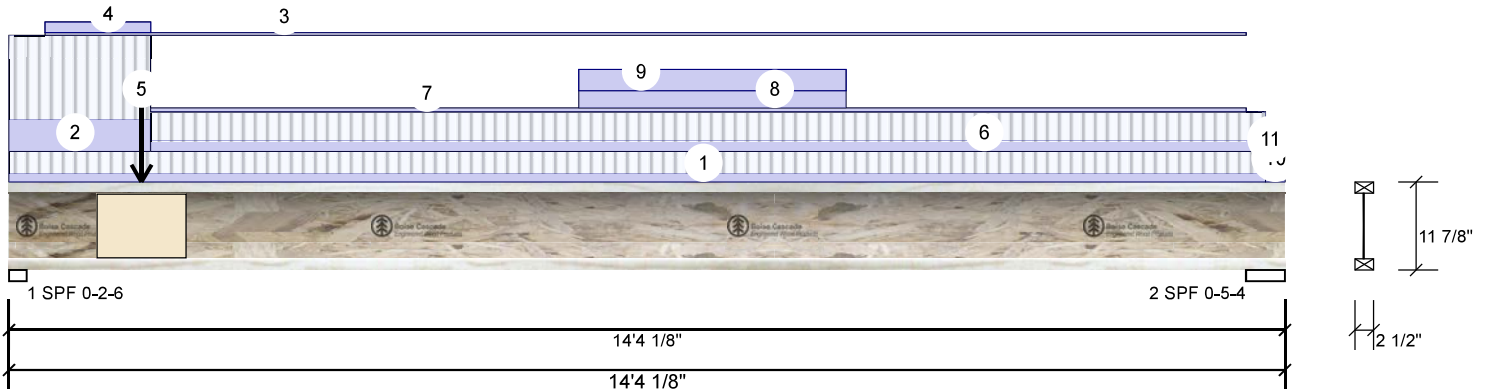
F3-C AJS 140

11.875"

PASSED

MHP 23029

Level: Ground Floor



...Continued from page 1

| ID | Load Type     | Location         | Trib Width | Side | Dead   | Live   | Snow  | Wind  | Comments |
|----|---------------|------------------|------------|------|--------|--------|-------|-------|----------|
| 8  | Part. Uniform | 6-4-14 to 9-4-15 |            | Top  | 13 PLF | 0 PLF  | 0 PLF | 0 PLF |          |
| 9  | Part. Uniform | 6-4-14 to 9-4-15 |            | Top  | 16 PLF | 0 PLF  | 0 PLF | 0 PLF |          |
| 10 | Tie-In        | 14-1-8 to 14-4-2 | 0-3-4      | Top  | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 11 | Tie-In        | 14-1-8 to 14-4-2 | 0-4-12     | Top  | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |



JULY 13, 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 4/17/2026

**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





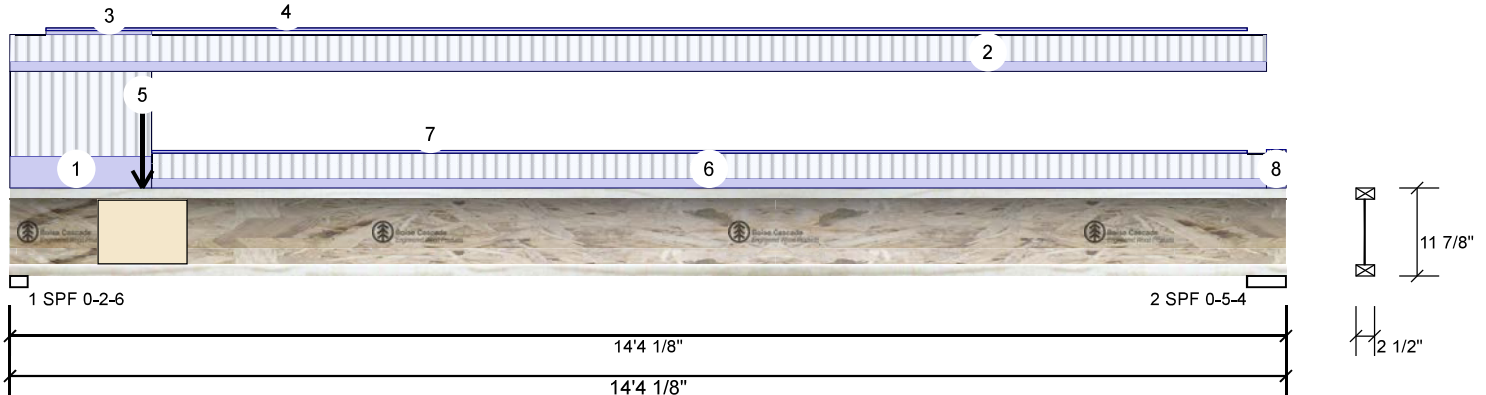


Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023

Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

**F3-D    AJS 140    11.8**

MHP 23029



## Member Information

|                     |             |                |                                    |
|---------------------|-------------|----------------|------------------------------------|
| Type:               | Girder      | Application:   | Floor (Residential)                |
| Plies:              | 1           | Design Method: | LSD                                |
| Moisture Condition: | Dry         | Building Code: | NBCC 2015<br>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 Ib (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind |
|-----|-----------|------|------|------|------|
| 1   | Vertical  | 633  | 271  | 0    | 0    |
| 2   | Vertical  | 315  | 146  | 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%  | 339 / 950    | 1289  | L        | 1.25D+1.5L |
| 2 - SPF | 5.250" | Vert | 34%  | 183 / 472    | 655   | L        | 1.25D+1.5L |

## Analysis Results

| Analysis      | Actual         | Location  | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|-----------|---------------|-------------|------------|---------|
| Moment        | 2466 ft-lb     | 6'2 3/8"  | 5305 ft-lb    | 0.465 (46%) | 1.25D+1.5L | L       |
| Unbraced      | 2466 ft-lb     | 6'2 3/8"  | 5305 ft-lb    | 0.465 (46%) | 1.25D+1.5L | L       |
| Shear         | 1267 lb        | 1 5/8"    | 2350 lb       | 0.539 (54%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.070 (L/2377) | 6'9 3/4"  | 0.461 (L/360) | 0.151 (15%) | D          | Uniform |
| LL Defl inch  | 0.152 (L/1090) | 6'9 1/4"  | 0.461 (L/360) | 0.330 (33%) | L          | L       |
| TL Defl inch  | 0.222 (L/747)  | 6'9 7/16" | 0.692 (L/240) | 0.321 (32%) | D+L        | L       |



JULY 13, 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 Bottom flange must be laterally braced at a maximum of 12'10 1/4" 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 1-7-2     | 1-7-0      | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 2  | Tie-In        | 0-0-0 to 14-1-8    | 0-6-0      | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 3  | Part. Uniform | 0-4-14 to 1-7-2    |            | Top      | 3 PLF  | 0 PLF  | 0 PLF | 0 PLF |          |
| 4  | Part. Uniform | 0-4-14 to 13-10-14 |            | Top      | 2 PLF  | 0 PLF  | 0 PLF | 0 PLF |          |
| 5  | Point         | 1-5-14             |            | Far Face | 128 lb | 323 lb | 0 lb  | 0 lb  | F1       |
| 6  | Tie-In        | 1-7-2 to 14-1-8    | 0-5-11     | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 7  | Part. Uniform | 1-7-2 to 13-10-14  |            | Top      | 2 PLF  | 0 PLF  | 0 PLF | 0 PLF |          |
| 8  | Tie-In        | 14-1-8 to 14-4-2   | 0-6-4      | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |

## Notes

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**Lumber**

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

## chemicals

## Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists 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  $\geq 3.5$  inches
7. For flat roofs provide proper drainage to prevent ponding

|                   |
|-------------------|
| Manufacturer Info |
|-------------------|

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

**Kott Inc.**  
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This design is valid until 4/17/2026

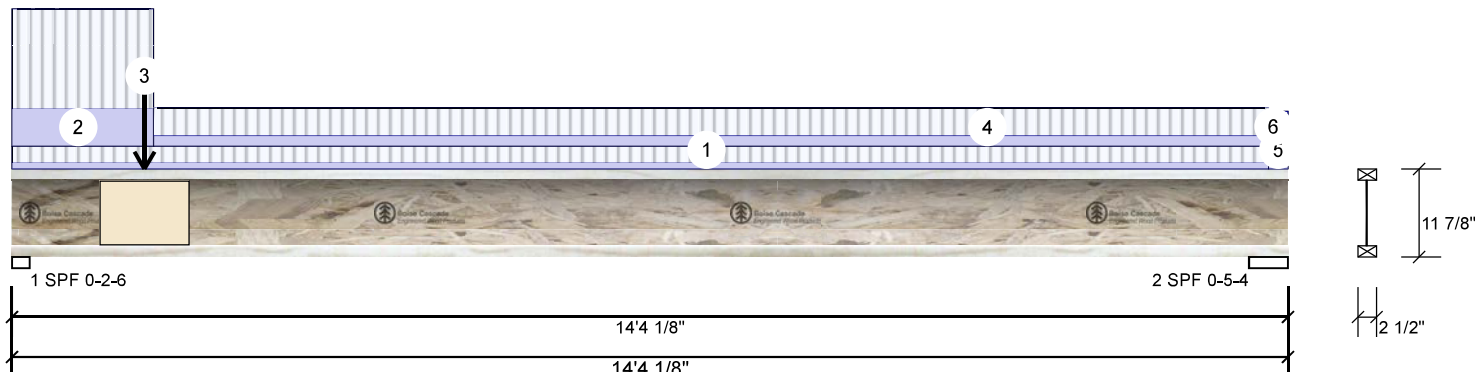


Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023

Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

F3-E AJS 140 11.875" - PASSED

MHP 23029



## Member Information

|                     |             |                |                                    |
|---------------------|-------------|----------------|------------------------------------|
| Type:               | Girder      | Application:   | Floor (Residential)                |
| Plies:              | 1           | Design Method: | LSD                                |
| Moisture Condition: | Dry         | Building Code: | NBCC 2015<br>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  | 568  | 215  | 0    | 0    |
| 2   | Vertical  | 242  | 91   | 0    | 0    |

## Bearings and Factored Reactions

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.  |
|---------|--------|------|------|--------------|-------|----------|------------|
| 1 - SPF | 2.375" | Vert | 66%  | 268 / 852    | 1120  | L        | 1.25D+1.5L |
| 2 - SPF | 5.250" | Vert | 25%  | 114 / 363    | 477   | L        | 1.25D+1.5L |

## Analysis Results

| Analysis      | Actual         | Location  | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|-----------|---------------|-------------|------------|---------|
| Moment        | 1870 ft-lb     | 5'9 3/8"  | 5305 ft-lb    | 0.352 (35%) | 1.25D+1.5L | L       |
| Unbraced      | 1870 ft-lb     | 5'9 3/8"  | 5305 ft-lb    | 0.352 (35%) | 1.25D+1.5L | L       |
| Shear         | 1100 lb        | 1 5/8"    | 2350 lb       | 0.468 (47%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.046 (L/3628) | 6'8 3/16" | 0.461 (L/360) | 0.099 (10%) | D          | Uniform |
| LL Defl inch  | 0.122 (L/1366) | 6'8 1/4"  | 0.461 (L/360) | 0.264 (26%) | L          | L       |
| TL Defl inch  | 0.167 (L/992)  | 6'8 3/16" | 0.692 (L/240) | 0.242 (24%) | D+L        | L       |



JULY 13, 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 Bottom flange must be laterally braced at a maximum of 12'10 1/4" o.c.

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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 14-1-8  | 0-3-2      | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 2  | Tie-In    | 0-0-0 to 1-7-2   | 1-7-0      | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 3  | Point     | 1-5-14           |            | Near Face | 126 lb | 331 lb | 0 lb  | 0 lb  | F1       |
| 4  | Tie-In    | 1-7-2 to 14-1-8  | 0-5-6      | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 5  | Tie-In    | 14-1-8 to 14-4-2 | 0-3-4      | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 6  | Tie-In    | 14-1-8 to 14-4-2 | 0-4-12     | 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  $\geq 3.5$  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 4/17/2026



Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023

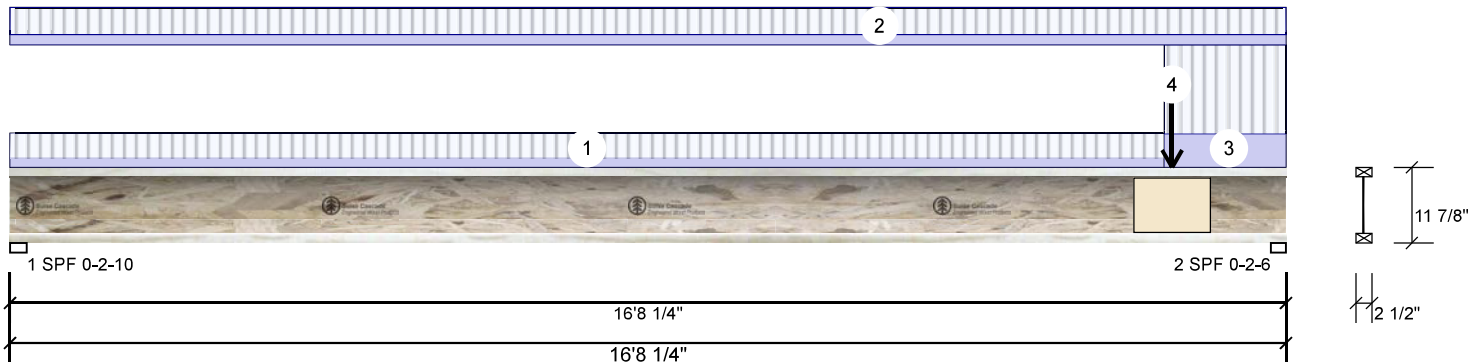
Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

|    |         |        |
|----|---------|--------|
| F4 | AJS 140 | 11.875 |
|----|---------|--------|

PER: **- PASSED**  
CHIEF BUILDING OFFICIAL

Level: Ground Floor

MHP 23029



## Member Information

|                     |             |                |                                    |
|---------------------|-------------|----------------|------------------------------------|
| Type:               | Girder      | Application:   | Floor (Residential)                |
| Plies:              | 1           | Design Method: | LSD                                |
| Moisture Condition: | Dry         | Building Code: | NBCC 2015<br>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 Ib (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind |
|-----|-----------|------|------|------|------|
| 1   | Vertical  | 341  | 128  | 0    | 0    |
| 2   | Vertical  | 726  | 272  | 0    | 0    |

## Bearings and Factored Reactions

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.  |
|---------|--------|------|------|--------------|-------|----------|------------|
| 1 - SPF | 2.625" | Vert | 39%  | 160 / 511    | 671   | L        | 1.25D+1.5L |
| 2 - SPF | 2.375" | Vert | 85%  | 341 / 1088   | 1429  | L        | 1.25D+1.5L |

## Analysis Results

| Analysis      | Actual         | Location  | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|-----------|---------------|-------------|------------|---------|
| Moment        | 3015 ft-lb     | 9'3 9/16" | 5305 ft-lb    | 0.568 (57%) | 1.25D+1.5L | L       |
| Unbraced      | 3015 ft-lb     | 9'3 9/16" | 5305 ft-lb    | 0.568 (57%) | 1.25D+1.5L | L       |
| Shear         | 1407 lb        | 16'6 5/8" | 2350 lb       | 0.599 (60%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.100 (L/1968) | 8'7 3/4"  | 0.546 (L/360) | 0.183 (18%) | D          | Uniform |
| LL Defl inch  | 0.266 (L/738)  | 8'7 3/4"  | 0.546 (L/360) | 0.488 (49%) | L          | L       |
| TL Defl inch  | 0.366 (L/537)  | 8'7 3/4"  | 0.820 (L/240) | 0.447 (45%) | D+L        | L       |



JULY 13, 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 Bottom flange must be laterally braced at a maximum of 15'2 3/8" 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 15-1-2  | 0-5-4      | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 2  | Tie-In    | 0-0-0 to 16-8-4  | 0-5-12     | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 3  | Tie-In    | 15-1-2 to 16-8-4 | 1-6-12     | Top      | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 4  | Point     | 15-2-6           |            | Far Face | 144 lb | 383 lb | 0 lb  | 0 lb  | F1       |

## Notes

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

**Lumber**

1. Dry service conditions, unless noted otherwise
2. 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  $\geq 3.5$  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 4/17/2026

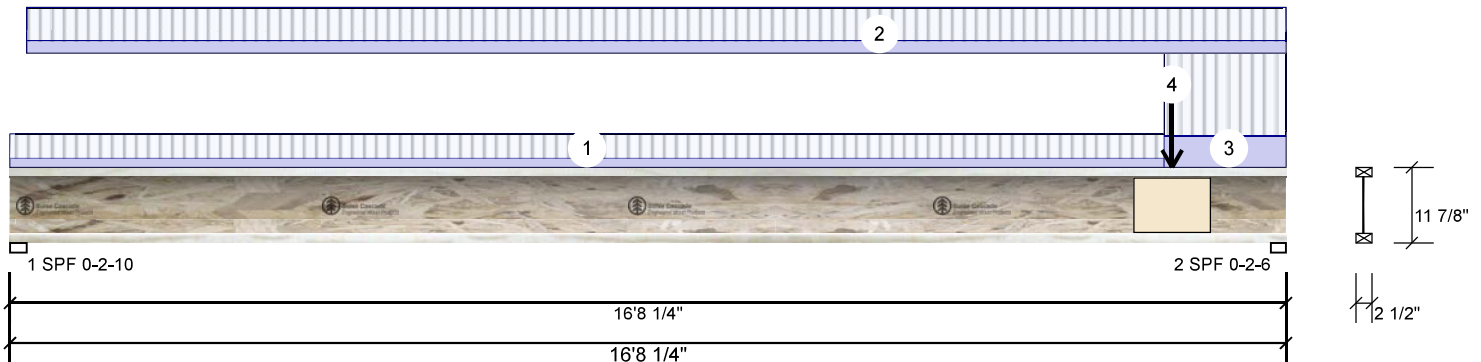


Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023

Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

**F4-A AJS 140 11.875" - PASSED**

MHP 23029



## Member Information

|                     |             |                |                                    |
|---------------------|-------------|----------------|------------------------------------|
| Type:               | Girder      | Application:   | Floor (Residential)                |
| Plies:              | 1           | Design Method: | LSD                                |
| Moisture Condition: | Dry         | Building Code: | NBCC 2015<br>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 Ib (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind |
|-----|-----------|------|------|------|------|
| 1   | Vertical  | 390  | 146  | 0    | 0    |
| 2   | Vertical  | 774  | 291  | 0    | 0    |

## Bearings and Factored Reactions

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.  |
|---------|--------|------|------|--------------|-------|----------|------------|
| 1 - SPF | 2.625" | Vert | 44%  | 183 / 586    | 769   | L        | 1.25D+1.5L |
| 2 - SPF | 2.375" | Vert | 91%  | 364 / 1161   | 1525  | L        | 1.25D+1.5L |

## Analysis Results

| Analysis      | Actual         | Location   | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|------------|---------------|-------------|------------|---------|
| Moment        | 3442 ft-lb     | 9'1 11/16" | 5305 ft-lb    | 0.649 (65%) | 1.25D+1.5L | L       |
| Unbraced      | 3442 ft-lb     | 9'1 11/16" | 5305 ft-lb    | 0.649 (65%) | 1.25D+1.5L | L       |
| Shear         | 1502 lb        | 16'6 5/8"  | 2350 lb       | 0.639 (64%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.114 (L/1727) | 8'7 1/4"   | 0.546 (L/360) | 0.208 (21%) | D          | Uniform |
| LL Defl inch  | 0.304 (L/648)  | 8'7 3/16"  | 0.546 (L/360) | 0.556 (56%) | L          | L       |
| TL Defl inch  | 0.417 (L/471)  | 8'7 3/16"  | 0.820 (L/240) | 0.509 (51%) | D+L        | L       |



JULY 13, 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 Bottom flange must be laterally braced at a maximum of 15'2 3/8" o.c.

**READ ALL NOTES ON THIS PAGE AND ON THE  
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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 15-1-2  | 0-5-8      | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 2  | Tie-In    | 0-2-10 to 16-8-4 | 0-7-8      | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 3  | Tie-In    | 15-1-2 to 16-8-4 | 1-6-12     | Top       | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 4  | Point     | 15-2-6           |            | Near Face | 142 lb | 377 lb | 0 lb  | 0 lb  | F1       |

## Notes

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

**Lumber**

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

## chemicals

## Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists 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  $\geq 3.5$  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



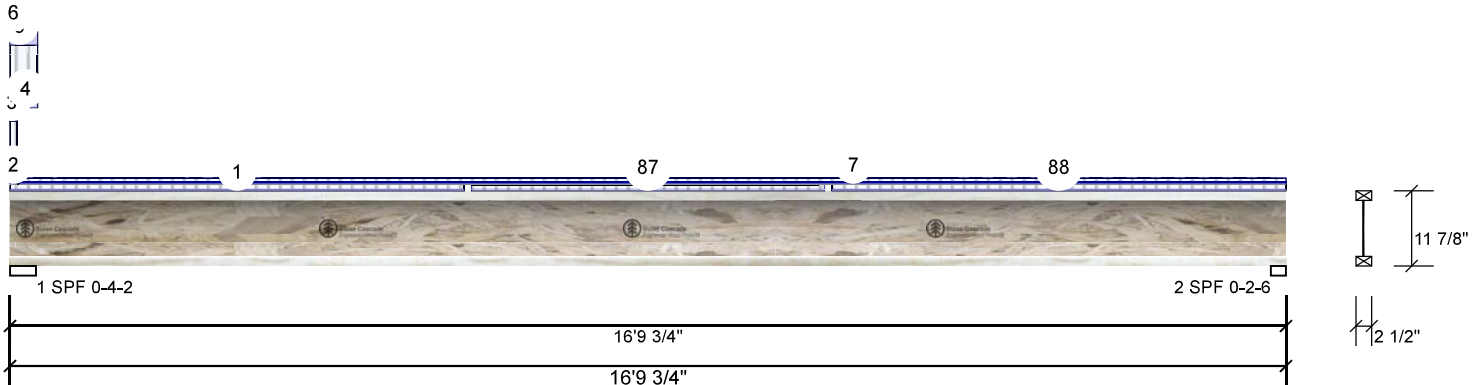
This design is valid until 4/17/2026



Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023  
PER: *C. Mann*  
375" - PASSED

Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

F4-B AJS 140 11.875" **PASSED** MHP 23029



## Member Information

|                     |             |                |                                    |
|---------------------|-------------|----------------|------------------------------------|
| Type:               | Girder      | Application:   | Floor (Residential)                |
| Plies:              | 1           | Design Method: | LSD                                |
| Moisture Condition: | Dry         | Building Code: | NBCC 2015<br>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 Ib (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind |
|-----|-----------|------|------|------|------|
| 1   | Vertical  | 577  | 263  | 0    | 0    |
| 2   | Vertical  | 455  | 171  | 0    | 0    |

## Bearings and Factored Reactions

| Bearing | Length | Dir. | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb.  |
|---------|--------|------|------|--------------|-------|----------|------------|
| 1 - SPF | 4.125" | Vert | 62%  | 329 / 866    | 1195  | L        | 1.25D+1.5L |
| 2 - SPF | 2.375" | Vert | 53%  | 213 / 683    | 896   | L        | 1.25D+1.5L |

## Analysis Results

| Analysis      | Actual         | Location | Allowed       | Capacity    | Comb.      | Case    |
|---------------|----------------|----------|---------------|-------------|------------|---------|
| Moment        | 3574 ft-lb     | 8'5 3/4" | 5305 ft-lb    | 0.674 (67%) | 1.25D+1.5L | L       |
| Unbraced      | 3574 ft-lb     | 8'5 3/4" | 5305 ft-lb    | 0.674 (67%) | 1.25D+1.5L | L       |
| Shear         | 933 lb         | 3 3/8"   | 2350 lb       | 0.397 (40%) | 1.25D+1.5L | L       |
| Perm Defl in. | 0.116 (L/1695) | 8'5 3/4" | 0.546 (L/360) | 0.212 (21%) | D          | Uniform |
| LL Defl inch  | 0.309 (L/636)  | 8'5 3/4" | 0.546 (L/360) | 0.566 (57%) | L          | L       |
| TL Defl inch  | 0.425 (L/463)  | 8'5 3/4" | 0.820 (L/240) | 0.519 (52%) | D+L        | L       |



JULY 13, 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 Bottom flange must be laterally braced at bearings.

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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 5-11-13 | 0-9-4      | Top  | 15 PSF  | 40 PSF  | 0 PSF | 0 PSF |                       |
| 2  | Part. Uniform | 0-0-0 to 0-1-2   |            | Top  | 118 PLF | 257 PLF | 0 PLF | 0 PLF | J7                    |
| 3  | Part. Uniform | 0-0-0 to 0-1-2   |            | Top  | 80 PLF  | 0 PLF   | 0 PLF | 0 PLF | Wall Self Weight      |
| 4  | Part. Uniform | 0-0-0 to 0-4-6   |            | Top  | 118 PLF | 257 PLF | 0 PLF | 0 PLF | J7                    |
| 5  | Part. Uniform | 0-0-0 to 0-4-6   |            | Top  | 80 PLF  | 0 PLF   | 0 PLF | 0 PLF | Wall Self Weight      |
| 6  | Part. Uniform | 0-0-9 to 0-0-9   |            | Top  | 4 PLF   | 0 PLF   | 0 PLF | 0 PLF | Rim Board Self Weight |
| 7  | Tie-In        | 0-1-8 to 16-9-12 | 0-7-6      | Top  | 15 PSF  | 40 PSF  | 0 PSF | 0 PSF |                       |

Continued on page 2...

## Notes

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**Lumber**

1. Dry service conditions, unless noted otherwise
2. 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  $\geq 3.5$  inches
7. For flat roofs provide proper drainage to prevent ponding

|                   |
|-------------------|
| Manufacturer Info |
|-------------------|

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

|           |  |
|-----------|--|
| Kott Inc. |  |
|-----------|--|

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



This design is valid until 4/17/2026





Client: GREENPARK  
Project: OF PERMIT PLANS  
Address: Nov 22 2023  
ES

Date: 7/12/2023  
Input by: W C  
Job Name: ROSE 3-3 STD  
Project #:

Page 23 of 47

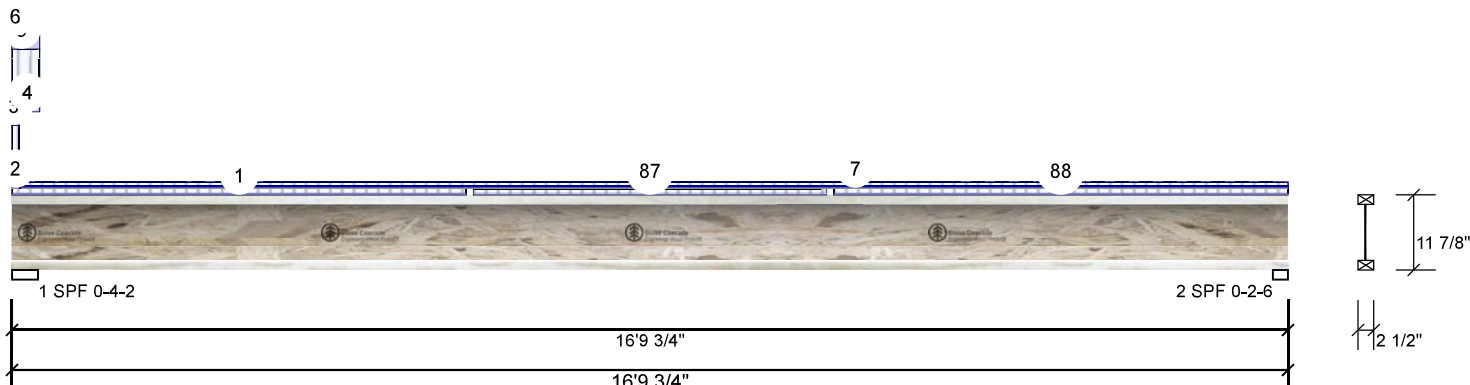
F4-B AJS 140

11.875"

PASSED

MHP 23029

Level: Ground Floor



...Continued from page 1

| ID | Load Type | Location           | Trib Width | Side | Dead   | Live   | Snow  | Wind  | Comments |
|----|-----------|--------------------|------------|------|--------|--------|-------|-------|----------|
| 87 | Tie-In    | 6-0-15 to 10-8-12  | 0-8-11     | Top  | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |
| 88 | Tie-In    | 10-9-14 to 16-9-12 | 0-9-4      | Top  | 15 PSF | 40 PSF | 0 PSF | 0 PSF |          |



JULY 13, 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 4/17/2026

**Manufacturer Info**

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