

REGION DESIGN INC 8700 DUFFERIN ST. CONCORD, ON L4K 4S6

Architectural Drawing Info

F7-B - 2 ply

Project # 17-04-07 Model: SANDSTONE 2A Date: JULY, 2018

JOISTS SPACING 16"O/C LIMI ESS NOTED OTHERWISE

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

Version 18.40.162 Powered by iStruct™

THIS CERTIFICATION IS TO CONFIRM THAT:

1. THE LOADS USED IN THE CALCULATION OF THE ATTACHED APPROVED COMPONENTS CONFORM TO THE FLOOR ASSEMBLY SHOWN ON THIS LAYOUT.

2. THE FLOOR JOISTS COMPLY WITH THE NASCOR SPAN TABLE FOR THE LOADS AND SPACING SHOWN ON THIS LAYOUT.

THE FLOOR SYSTEM MUST BE ASSEMBLED IN ACCORDANCE TO THE NASCOR SPECIFIER GUIDE. MULTI-PLY MEMBERS MUST BE ATTACHED TOGETHER AS PER THE INCLUDED MULTIPLE MEMBER CONNECTION DETAIL.

ALL OTHER COMPONENTS AND STRUCTURAL ELEMENTS SUPPORTING THE FLOOR SYSTEM SUCH AS BEAMS, WALLS, **COLUMNS AND FOUNDATION WALLS AND FOOTINGS** INCLUDING ANCHORAGE OF COMPONENTS AND BRACING FOR LATERAL STABILITY ARE THE RESPONSIBILITY OF OTHERS.

This layout is to be used as an installation guide ly. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

PROFESSION

N.A. EL-MASRI

F7-A - 2 ply

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

.VL/LSL Label Width Depth Qty Pcs Length Description Plies F3 Forex 11.875 2.0E-3000Fb LVL F14 Forex 1.75 11.875 8-0-0 2.0E-3000Fb LVL F2 1.75 11.875 6-0-0 2 2.0E-3000Fb LVL F9 1.75 11.875 4-0-0 Forex 2.0E-3000Fb LVL Joist Qty 4 Label Description Width Depth Plies Pcs Length F10 NJ 2 1.5 11.875 8 18-0-0 F8 NJ 1.5 11.875 8-0-0 F7 NJ 1.5 11.875 2 4-0-0 4 J7 NJ60U 3.5 11.875 20 18-0-0 J6 NJH 2.5 11.875 16-0-0 J5 NJH 25 11 875 11 14-0-0 J3 NJH 2.5 11.875 10-0-0 J2 NJH 2.5 11.875 2.5 11.875 J1 NJH 5 6-0-0 Rim Board Label Description Width Depth Qty Plies Pcs Length Norbord Rimboard 1.125 11.875 15 Plus 1.125 X 11.875 Blocking Label Description Width Depth Qty Plies Pcs Length 2.5 11.875 LinFt BLK1 NJH Varies 23-0-0 Hanger Beam/Girder

Skew Slope

fasteners

14 10dx1 1/2

4 10d

4 10d

4 10d

H10 NOTES:

Label

H7

H8

Ground Floor

Framer to verify dimensions on the architectural drawings.

Pcs Description

4 LT2-151188

22 LT251188

1 LT351188

1 HUC210-2 (Min

Unknown Hanger

Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.

Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls.

Install single-ply flush window header along inside face of rimboard/rimjoist Refer to Nascor specifier guide for installation details.

Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding two levels floor or roof. Load transfer blocks to be installed under all point loads.

It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.

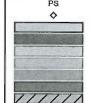
Refer to Multiple Member Connection Detail to ply to ply nailing or bolting

Rim parallel to joists: 1-1/8" rimboard with 2"x4" block (1/16" longer than rim depth) @ 16" o/c. All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others

Hatch area represents ceramic tiled floor with an additional dead load

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

Legend



Point Load Support Load from Above Norbord Rimboard Plus 1,125 X 11,875 NJ 11.875 NJ60U 11.875 NJH 11.875

Forex 2.0E-3000Fb LVL 1.75 X 11.875 5.25 X 10.25 (Dropped)

Layout Name SANDSTON 2A EL-2 WOD CONDITION

Design Method LSD

Description **GREENPARK HOMES** MINISALE, BRAMPTON, ON

Created June 29, 2018 Builder

Sales Rep

RM 8-0-0 Designer SB Shipping

Project Builder's Project

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

Member

6 10d

Ground Floor fasteners LSD Design Method Building Code NBCC 2010 / OBC 2 10dx1 1/2 2012 2 10dx1 1/2

2 10dx1 1/2 Floor oads Live

40

Dead 15 Deflection Joist 480 LL Span L/ 360 TL Span L/ LL Cant 2L/ 480 TL Cant 2L/ 360 Deflection Girder LL Span L/

360 TL Span L/ 240 LL Cant 2L/ 480 TL Cant 2L/ 360 Decking Deck OSB

Thickness 3/4" Nailed & Glued Fastener Vibration

IPLE MEMBER CONNECTIONS

GREENPARK HOMES-MINISALE-SANDSTONE 2A EL 2-BRAMPTON-ON

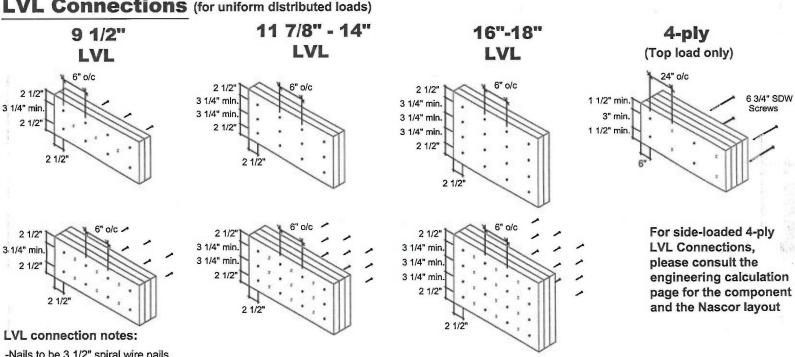
Conventional Connections (for uniform distributed loads)

2x10 2x12 2x6 2x8 2-ply 3-ply

Conventional connection notes:

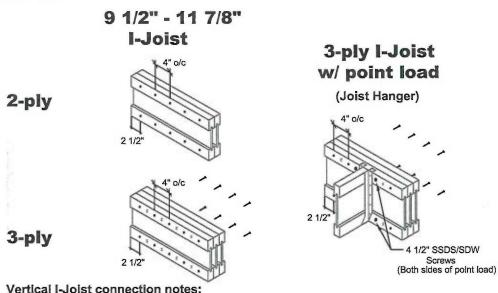
- -Nails to be 3" 10d spiral wire nails.
- -Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

LVL Connections (for uniform distributed loads)



- -Nails to be 3 1/2" spiral wire nails.
- -Nails to be located a minimum of 2 1/2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
- -Minimum 3 1/4" spacing between rows.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail or screw driven from the opposite side.

Vertical I-Joist Connections (for uniform distributed loads)



Vertical I-Joist connection notes:

- -Nails to be 3" spiral wire nails.
- -Nails to be located at centre of top and bottom flanges. Start all nails a minimum of 2 1/2" in from ends.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

MULTI-PLY CONNECTION **DETAILS**

Date: November 30, 2016

KOTT 3228 Moodie Drive Ottawa, ON **K2H 7V1** Ph: 613-838-2775 Fx: 613-838-4751

Engineering Note Page (ENP-2) REVISION 2009-10-09

GREENPARK HOMES-MINISALE-SANDSTONE 2A EL 2-BRAMPTON-ON

Please read all notes prior to installation of the component

DESIGN INFORMATION

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

The responsibility of the undersigned engineer is <u>only</u> 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 NASCOR 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 squash blocks. Structural elements such as walls, posts, connectors, and squash blocks are the responsibility of the overall building designer.

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

Installation of NASCOR joists is to be carried out in accordance with the current edition of the manufacturer's approved literature available at http://www.nascor.ca.

CODE

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

COMPONENT

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

HANDLING AND INSTALLATION

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



TIPLE MEMBER CONNECTIONS

GREENPARK HOMES-MINISALE-SANDSTONE 2A EL 2-BRAMPTON-ON

Conventional Connections (for uniform distributed loads)

2x10 2x12 2x6 2x8 2-ply 3-ply

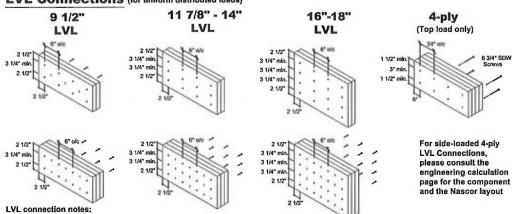
Conventional connection notes:

- -Nalls to be 3" 10d spiral wire nails.
- -Nalis to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.

 -Number of rows and spacing as per details shown, unless noted otherwise.

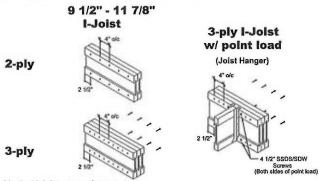
 -"X" represents nall driven from the opposite side.

LVL Connections (for uniform distributed loads)



- -Nails to be 3 1/2" spiral wire nails.
- -Yalis to be located a minimum of 2 1/2* from the top and bottom of the member, Start all nalls a minimum of 2 1/2* in from ends.
 -Minimum 3 1/4* spacing between rows.
 -Mumber of rows end spacing as per details shown, unless noted otherwise.
 "X" represents nail or screw driven from the opposite side.

Vertical I-Joist Connections (for uniform distributed loads)



Vertical I-Joist connection notes:

- -Nails to be 3" spiral wire nails
- -Nalls to be located at centre of top and bottom flanges. Start all nalls a minimum of 2 1/2" in from ends.
 -Number of rows and spacing as per details shown, unless noted otherwise.
 -"X" represents neil driven from the opposite side.

MULTI -PLY CONNECTION DETAILS



KOTT 3228 Moodle Drive Ottawa, ON K2H 7V1 Ph: 613-838-2775 Fx: 613-838-4751



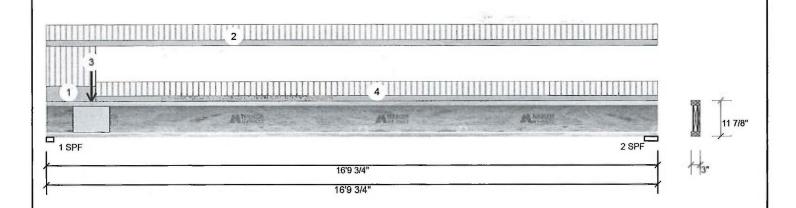
Client: Project: Address: Date: 8/14/2018 Designer: SB

Job Name: SANDSTON 2A EL-2

Project #

2-Ply - PASSED 11.875" F10-B NJ

Level: Ground Floor



| Member Inform | nation | | | Unfacto | red Reac | tions U | NPATTERN | ED lb (| Uplift) | |
|--------------------|--------|----------------|----------------------|----------|----------|---------|--------------|---------|----------|------------|
| Туре: | Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | v | Wind |
| Plies: | 2 | Design Method: | LSD | 1 | 663 | | 248 | | 0 | 0 |
| Moisture Condition | : Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 362 | | 136 | | 0 | 0 |
| Deflection LL: | 360 | Load Sharing: | No | | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | | | |
| General Load | | 100.2 | | | | | | | <u> </u> | |
| Floor Live: | 40 PSF | | | Bearings | and Fac | tored F | leactions - | | | |
| Dead: | 15 PSF | | | Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
| | | | | 1 - SPF | 2.375" | 46% | 310 / 994 | 1304 | L | 1.25D+1.5L |
| | | | | 2-SPF | 4.375" | 21% | 169 / 543 | 712 | L | 1.25D+1.5L |

Analysis Results

| п | | | | | | | |
|---|---------------|----------------|------------|---------------|-------------|------------|---------|
| | Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
| l | Moment | 3007 ft-lb | 7'9 1/4" | 9020 ft-lb | 0.333 (33%) | 1.25D+1.5L | L |
| | Unbraced | 3007 ft-lb | 7'9 1/4" | 3044 ft-lb | 0.988 (99%) | 1.25D+1.5L | L |
| l | Shear | 1284 lb | 1 5/8" | 3400 lb | 0.378 (38%) | 1.25D+1.5L | L |
| | Perm Defl in. | 0.061 (L/3211) | 8'1 11/16" | 0.546 (L/360) | 0.110 (11%) | D | Uniform |
| l | LL Defl inch | 0.163 (L/1203) | 8'1 11/16" | 0.546 (L/360) | 0.300 (30%) | L | L |
| | TL Defl inch | 0.224 (L/875) | 8'1 11/16" | 0.819 (L/240) | 0.270 (27%) | D+L | L |
| | | | | | | | |

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'3" o.c.

5 Bottom flange braced at bearings.

| READ ALI | L NOTES ON THIS PAGE AND ON |
|-----------|--------------------------------|
| ENGINEE | RING NOTE PAGE ENP-2. THIS |
| NOTE PAG | GE IS AN INTEGRAL PART OF THIS |
| CALCULA | TION SUMMARY PAGE AS IT |
| CONTAIN | S SPECIFICATIONS AND CRITERIA |
| USED IN 1 | THE DESIGN OF THIS COMPONENT. |

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS



| | o bollont nunge | billoca at bearings. | | | | | | | | | |
|---|-----------------|----------------------|------------------|--------------|----------|--------|--------|-------|-------|----------|--|
| ı | D | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments | |
| • | 1 | Tie-In | 0-0-0 to 1-4-6 | (Span)2-9-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| 2 | 2 | Tie-In | 0-0-0 to 16-9-12 | (Span)1-0-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| 3 | 3 | Point | 1-2-14 | | Far Face | 113 lb | 303 lb | 0 lb | 0 lb | F7 | |
| 4 | 4 | Tie-In | 1-4-6 to 16-9-12 | (Span)0-11-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |

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

Dry service conditions, unless noted otherwise
 Uplish not to be treated with fire retardant or correstve

chemicals

Handling & Installation

andling & Installation

Loist flanges must not be cut or drilled

Refer to latest copy of the Lioist product information
details for framing details, stiffener tables, web hole
chart, bridging details, multi-ply fastening details and
handling/erection details

Damaged Loists must not be used

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

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

Manufacturer Info

Nascor by Kott

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





1.195-

Page 1 of 1



Client: Project:

Address:

Date: 8/14/2018

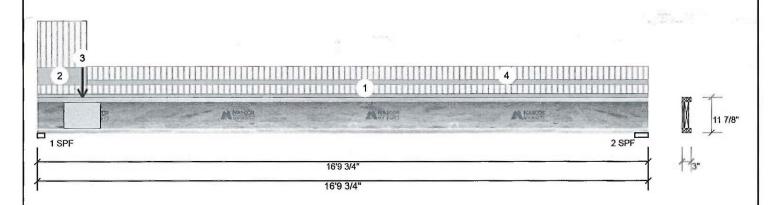
Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

11.875" 2-Ply - PASSED F10-C NJ

Level: Ground Floor



| Member Infor | mation | | 1777 | Unfactor | red Reac | tions U | INPATTERN | ED lb (| Uplift) | |
|-------------------|--------|----------------|----------------------|----------|----------|---------|--------------|---------|----------|------------|
| Туре: | Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snow | v | Wind |
| Plies: | 2 | Design Method: | LSD | 1 | 584 | | 219 | (| o | 0 |
| Moisture Conditio | n: Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 251 | | 94 | (| 0 | 0 |
| Deflection LL: | 360 | Load Sharing: | No | | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | 1.0 | | | | | |
| Importance: | Normal | Vibration: | Not Checked | I | | | | | | |
| General Load | | | | | | | | | | |
| Floor Live: | 40 PSF | | | Bearings | and Fac | tored | Reactions | | | |
| Dead: | 15 PSF | | | Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
| | | | | 1-SPF | 2.375" | 40% | 274 / 876 | 1150 | L | 1.25D+1.5L |
| | | | | 2-SPF | 4.375" | 14% | 118 / 376 | 493 | L | 1.25D+1.5L |
| - I bear December | | | | | | | | | | |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|------------|---------------|-----------------|------------|---------|
| Moment | 2173 ft-lb | 7'4 15/16" | 9020 ft-lb | 0.241 (24%) | 1.25D+1.5L | L |
| Unbraced | 2173 ft-lb | 7'4 15/16" | 2175 ft-lb | 0.999 (100%) | 1.25D+1.5L | L |
| Shear | 1133 lb | 1 5/8" | 3400 lb | 0.333 (33%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.044 (L/4417) | 8' 9/16" | 0.546 (L/360) | 0.080 (8%) | D | Uniform |
| LL Defl inch | 0.119 (L/1657) | 8' 9/16" | 0.546 (L/360) | 0.220 (22%) | L | L |
| TL Defl inch | 0.163 (L/1205) | 8' 9/16" | 0.819 (L/240) | 0.200 (20%) | D+L | L |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'11" o.c.
- 5 Bottom flange braced at bearings.

| 0 00110 | ner menific minnen ar manimif. | •• | | | | | | | | |
|---------|--------------------------------|------------------|-------------|-----------|--------|--------|-------|-------|----------|--|
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments | |
| 1 | Tie-In | 0-0-0 to 16-9-12 | (Span)0-6-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| 2 | Tie-In | 0-0-0 to 1-4-6 | (Span)2-9-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| 3 | Point | 1-2-14 | | Near Face | 125 lb | 333 lb | 0 lb | 0 lb | F7 | |
| 4 | Tie-In | 1-4-6 to 16-9-12 | (Span)0-9-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |

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.

chemicals

Handling & Installation

- Handling & Installation

 1. Idols 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-pyl satelning details and handling/erection details

 3. Damaged IJoist must not be used

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

Provide lateral support at bearing points to avoid lateral displacement and rotation.
 Web stiffeness for point load as shown Minimum point load bearing lengths—3.5 inches.
 For flat roofs provide proper drainage to prevent ponding.

Manufacturer Info

Nascor by Kott

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







Client:

Project: Address: Date: 8/14/2018

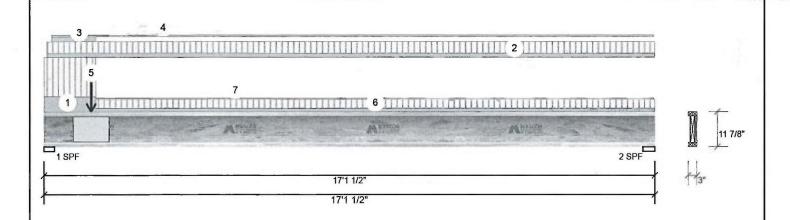
Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

2-Ply - PASSED NJ 11.875" F10-D

Level: Ground Floor



| Nember Infor | mation | | | Unfactor | red Reac | tions U | NPATTERN | D lb (| Uplift) | |
|-------------------|--------|----------------|----------------------|----------|----------|---------|--------------|--------|----------|------------|
| Туре: | Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | N | Wind |
| Plies: | 2 | Design Method: | LSD | 1 | 643 | | 326 | | 0 | 0 |
| Moisture Conditio | n: Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 270 | | 139 | | 0 | 0 |
| Deflection LL: | 360 | Load Sharing: | No | | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | | | |
| General Load | | | | | | | | | | |
| Floor Live: | 40 PSF | 14 12 | | Bearings | and Fac | tored F | Reactions | | | |
| Dead: | 15 PSF | | | Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
| | | | | 1-SPF | 3.500" | 42% | 407 / 965 | 1371 | L | 1.25D+1.5L |
| | | | | 2-SPF | 4.125" | 17% | 173 / 404 | 578 | L | 1.25D+1.5L |

| rinary 515 fees | · ui to | | | | | |
|-----------------|----------------|-----------|---------------|-------------|------------|---------|
| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
| Moment | 2589 ft-lb | 7'7 3/8" | 9020 ft-lb | 0.287 (29%) | 1.25D+1.5L | L |
| Unbraced | 2589 ft-lb | 7'7 3/8" | 2628 ft-lb | 0.985 (99%) | 1.25D+1.5L | L |
| Shear | 1342 lb | 2 3/4" | 3400 lb | 0.395 (39%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.069 (L/2907) | 8'3 1/16" | 0.554 (L/360) | 0.120 (12%) | D | Uniform |
| LL Defl inch | 0.133 (L/1494) | 8'3 1/16" | 0.554 (L/360) | 0.240 (24%) | L | L |
| TL Defl inch | 0.202 (L/987) | 8'3 1/16" | 0.831 (L/240) | 0.240 (24%) | D+L | L |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'6" o.c.
- 5 Bottom flange braced at bearings.

| ı. | o bottom nange | bracea at bearings. | | | | | | | | | |
|----|----------------|---------------------|------------------|-------------|----------|--------|--------|-------|-------|----------|--|
| ľ | ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments | |
| ı | 1 | Tie-In | 0-0-0 to 1-5-8 | (Span)2-9-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| ı | 2 | Tie-In | 0-1-2 to 17-1-8 | (Span)0-9-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| ı | 3 | Part. Uniform | 0-2-10 to 1-5-8 | | Тор | 7 PLF | 0 PLF | 0 PLF | 0 PLF | | |
| l | 4 | Part. Uniform | 0-2-11 to 17-1-1 | | Тор | 2 PLF | 0 PLF | 0 PLF | 0 PLF | | |
| l | 5 | Point | 1-4-0 | | Far Face | 186 lb | 367 lb | 0 lb | 0 lb | F7 | |
| | 6 | Tie-In | 1-5-8 to 17-1-8 | (Span)0-7-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| | 7 | Part. Uniform | 1-5-8 to 17-1-0 | | Тор | 2 PLF | 0 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.

Lumber

Handling & Installation

- Handling & Installation

 1. Just flanges must not be cut or drilled

 2. Refer to latest copy of the Justs product information details for framing details, stiffener tables, web hole chart, bridging details, multi-py fastening details and handling/erection details

 3. Damaged Justias must not be used

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

Provide lateral support at bearing points to avoid tateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
 To for flat roofs provide proper d

Manufacturer Info Nascor by Kott

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







Client: Project: Address:

8/14/2018 Date:

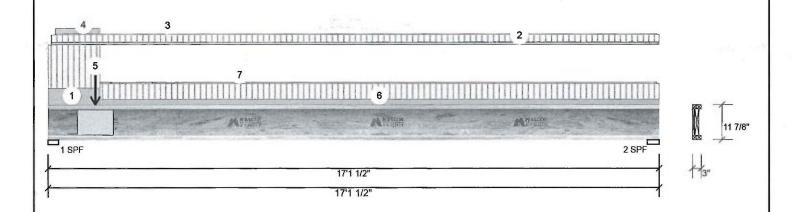
Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

2-Ply - PASSED F10-E NJ 11.875"

Level: Ground Floor



| Member Inform | nation | | | Unfactor | ed React | tions U | NPATTERN | ED lb (| Uplift) | |
|---------------------|--------|----------------|----------------------|----------|----------|---------|--------------|---------|----------|------------|
| Туре: | Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | v | Wind |
| Plies: | 2 | Design Method: | LSD | 1 | 575 | | 281 | | 0 | 0 |
| Moisture Condition: | Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 265 | | 128 | | 0 | 0 |
| Deflection LL: | 360 | Load Sharing: | No | | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | 1 | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | 1 | | | | | | |
| General Load | | | | | | | | | | |
| Floor Live: | 40 PSF | | | Bearings | and Fac | tored I | Reactions | | | |
| Dead: | 15 PSF | | | Bearing | Length | Сар. | React D/L lb | Total | Ld. Case | Ld. Comb. |
| | | | | 1-SPF | 3.500" | 38% | 352 / 863 | 1215 | L | 1.25D+1.5L |
| | | | | 2-SPF | 4.125" | 16% | 160 / 398 | 557 | L | 1.25D+1.5L |

Analysis Results

| Capacity Comb. Case |
|--------------------------|
| 0.272 (27%) 1.25D+1.5L L |
| 0.991 (99%) 1.25D+1.5L L |
| 0.349 (35%) 1.25D+1.5L L |
| 0) 0.110 (11%) D Uniform |
| 0) 0.230 (23%) L L |
| 0) 0.230 (23%) D+L L |
| |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'8" o.c.

| 2 POHOIII | liange praced at bearing | 5. | | | | | | | |
|-----------|--------------------------|------------------|--------------|-----------|--------|--------|-------|-------|----------|
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
| 1 | Tie-In | 0-0-0 to 1-5-8 | (Span)2-9-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-1-2 to 17-1-8 | (Span)0-5-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Part. Uniform | 0-2-6 to 17-0-12 | | Тор | 1 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 4 | Part. Uniform | 0-2-8 to 1-5-8 | | Тор | 7 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 5 | Point | 1-4-0 | | Near Face | 151 lb | 304 lb | 0 lb | 0 lb | F7 |
| 6 | Tie-In | 1-5-8 to 17-1-8 | (Span)0-11-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 7 | Part. Uniform | 1-5-8 to 17-0-12 | | Тор | 2 PLF | 0 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.

Lumber

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

chemicals

Handling & Installation

- Handling & Installation

 1. Juloist 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-py f

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

Manufacturer Info Nascor by Kott

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





Client: Project: Address:

8/14/2018 Date:

Designer: SB

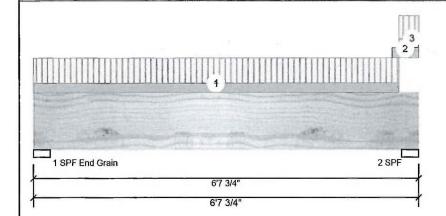
Job Name: SANDSTON 2A EL-2

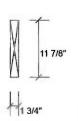
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





Wind

0

0

1.25D+1.5L

1.25D+1.5L

S PROFESSIONAL

N.A. EL-MASRI,

0

0

1329 L

1363 L

| Member Info | rmation | | |
|--------------------|---------|----------------|----------------------|
| Туре: | Girder | Application: | Floor (Residential) |
| Plies: | 1 | Design Method: | LSD |
| Moisture Condition | on: Dry | Building Code: | NBCC 2010 / OBC 2012 |
| Deflection LL: | 360 | Load Sharing: | No |
| Deflection TL: | 240 | Deck: | Not Checked |
| Importance: | Normal | Vibration: | Not Checked |
| General Load | | | |
| Floor Live: | 40 PSF | | |
| Dead: | 15 PSF | | |
| | | l l | |

| Unfactored | Reactions | UNPATTER | NED Ib (Uplift) |
|------------|-----------|----------|-----------------|
| Brg | Live | Dead | Snow |

265

299

665

659

2

1-SPF 3.500"

2-SPF 3.500"

End Grain

| Bearings | and Fa | ctored Reactions | | | |
|----------|--------|-------------------|-------|----------|-----------|
| Bearing | Length | Cap. React D/L lb | Total | Ld. Case | Ld. Comb. |

332 / 997

374 / 988

Analysis Results

Design Notes

2 Top braced at bearings.

3 Bottom braced at bearings.

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|----------|---------------|-------------|------------|---------|
| Moment | 1914 ft-lb | 3'3 7/8" | 17130 ft-lb | 0.112 (11%) | 1.25D+1.5L | L |
| Unbraced | 1914 ft-lb | 3'3 7/8" | 7267 ft-lb | 0.263 (26%) | 1.25D+1.5L | L |
| Shear | 1230 lb | 5'5 1/8" | 5798 lb | 0.212 (21%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.008 (L/9867) | 3'3 7/8" | 0.206 (L/360) | 0.040 (4%) | D | Uniform |
| LL Defl inch | 0.019 (L/3947) | 3'3 7/8" | 0.206 (L/360) | 0.090 (9%) | L | L |
| TL Defl inch | 0.026 (L/2819) | 3'3 7/8" | 0.309 (L/240) | 0.090 (9%) | D+L | L |

1 Girders are designed to be supported on the bottom edge only.

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS

36%

29%

CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

BLOCK IS REQUIRED AT ALL

PASS THRU FRAMING SQUASH

| POINT LOADS | OVER | BEARINGS. | Con |
|-------------|------|-----------|-----|
| | | | |

| Load Type | Location | Trib Width | Side | Dead | IPOINT LOA | D2 OAEK B | EARINGS. | 1 Comments | |
|---------------|------------------|------------|-----------|--------|------------|-----------|----------|------------------|--|
| Part. Uniform | 0-0-0 to 6-3-12 | | Near Face | 75 PLF | 200 PLF | 0 PLF | 0 PLF | | |
| Part. Uniform | 6-2-4 to 6-7-12 | | Тор | 80 PLF | 0 PLF | 0 PLF | 0 PLF | Wall Self Weight | |
| Part. Uniform | 6-3-12 to 6-7-12 | | Тор | 69 PLF | 183 PLF | 0 PLF | 0 PLF | J3 | |
| Self Weight | | | | 5 PLF | | | | | |



Calculated Struchured 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 inlended application, and to verify the dimensions and loads.

Lumber

chemicals

Handling & Installation

andling & Installation

LVL beams must not be cut or drilled

Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

Damaged Beams must not be used

Design assumes top edge is laterally restrained

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

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









Client: Project: Address:

8/14/2018 Date: Designer: SB

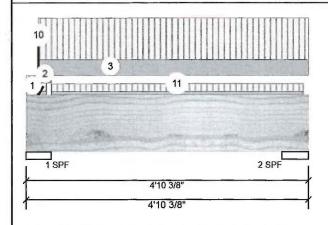
> Job Name: SANDSTON 2A EL-2

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





| Member | Information |
|--------|-------------|
| Type: | Girder |

| Туре: | Girder |
|---------------------|--------|
| Plies: | 1 |
| Moisture Condition: | Dry |
| Deflection LL: | 360 |
| Deflection TL: | 240 |
| Importance: | Normal |
| General Load | |
| Floor Live: | 40 PSF |
| Dead: | 15 PSF |
| | |

Application: Floor (Residential) Design Method: **Building Code:** NBCC 2010 / OBC 2012 Load Sharing: Deck: Not Checked

Not Checked

Brg 2

Unfactored Reactions UNPATTERNED Ib (Uplift)

Wind

0

0

Snow

0

0

| Bearings | and | Factored | Reactions |
|----------|-----|----------|-----------|
| - | | | |

Live

1812

231

| Bearing I | Length Cap | . React D/L lb | Total | Ld. Case | Ld. Comb. |
|-----------|------------|----------------|-------|----------|------------|
| 1 - SPF 5 | 5.250" 82% | 1016 / 2719 | 3735 | L | 1.25D+1.5L |
| 2-SPF 5 | 5.500" 8% | 6 123 / 346 | 469 | L | 1.25D+1.5L |

Dead

813

98

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|--------------------|------------|---------------|------------|------------|---------|
| Moment | 405 ft-lb | ·2'5 1/16" | 17130 ft-lb | 0.024 (2%) | 1.25D+1.5L | L |
| Unbraced | 405 ft-lb | 2'5 1/16" | 10983 ft-lb | 0.037 (4%) | 1.25D+1.5L | L |
| Shear | 204 lb | 1'4 3/8" | 5798 lb | 0.035 (4%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.001 (L/49514) | 2'5 1/8" | 0.136 (L/360) | 0.010 (1%) | D | Uniform |
| LL Defl inch | 0.002 (L/21048) | 2'5 1/8" | 0.136 (L/360) | 0.020 (2%) | L | L |
| TL Defl inch | 0.003 (L/14770) | 2'5 1/8" | 0.205 (L/240) | 0.020 (2%) | D+L | L |

Vibration:

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY

NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL

POINT LOADS OVER BEARINGS



Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.

| 4 | Bottom braced at bearings. | | | | | | | | |
|----|----------------------------|------------------|--------------|------|--------|---------|-------|-------|----------|
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
| 1 | Tie-In | 0-0-0 to 0-4-4 | (Span)0-9-15 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-0-0 to 0-5-4 | (Span)0-6-1 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Part. Uniform | 0-2-10 to 4-10-6 | | Тор | 30 PLF | 80 PLF | 0 PLF | 0 PLF | |
| 4 | Point | 0-2-10 | | Тор | 647 lb | 1491 lb | 0 lb | 0 lb | BM2 BM2 |
| 5 | Point | 0-2-10 | | Тор | 11 lb | 29 lb | 0 lb | 0 lb | J5 |
| 6 | Point | 0-2-10 | | Тор | 17 lb | 46 lb | 0 lb | 0 lb | J4 |

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

Manufacturer Info

Forex

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





Page 2 of 2



Client: Project: Address:

8/14/2018 Date: Designer:

SB

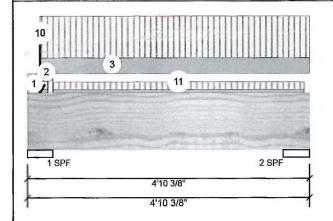
Job Name: SANDSTON 2A EL-2

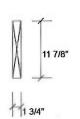
Project #:

F2-A Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





| Continued | from page 1 | | | | | | | | |
|-----------|-------------|----------------|-------------|------|--------|--------|-------|-------|------------------|
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
| 7 | Point | 0-2-10 | | Тор | 28 lb | 0 lb | 0 lb | 0 lb | Wall Self Weight |
| 8 | Point | 0-2-10 | | Тор | 7 lb | 19 lb | 0 lb | 0 ib | J5 |
| 9 | Point | 0-2-10 | | Тор | 4 lb | 11 lb | 0 lb | 0 lb | J4 |
| 10 | Point | 0-2-10 | | Тор | 6 lb | 0 lb | 0 lb | 0 lb | Wall Self Weight |
| 11 | Tie-In | 0-5-4 to 4-9-4 | (Span)0-9-1 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| | Self Weight | | | | 5 PLF | | | | |

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Notes

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

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

Handling & Installation

Handling & Installation

1. LVL beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, mutili-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

Manufacturer Info

APA: PR-L318

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







Client: Project: Address:

8/14/2018 Date: Designer: SB

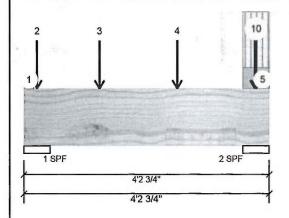
Job Name: SANDSTON 2A EL-2

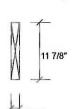
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





| Member Information | | | | | Unfactored Reactions UNPATTERNED Ib (Uplift) | | | | | |
|--------------------|---------|----------------|----------------------|------------|--|-------------------|----------------|------------|--|--|
| Туре: | Girder | Application: | Floor (Residential) | Brg | Live | Dead | Snow | Wind | | |
| Plies: | 1 | Design Method: | LSD | 1 | 1677 | 714 | 0 | 0 | | |
| Moisture Condition | on: Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 968 | 498 | 0 | 0 | | |
| Deflection LL: | 360 | Load Sharing: | No | | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | 1 | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | | | |
| General Load | | | | | | | | | | |
| Floor Live: | 40 PSF | | | Bearings a | and Facto | ored Reactions | | | | |
| Dead: | 15 PSF | | | Bearing L | ength. | Cap. React D/L lb | Total Ld. Case | Ld. Comb. | | |
| | | | | 1-SPF 5 | .500" | 60% 892 / 2515 | 3407 L | 1.25D+1.5L | | |
| | | | | 2-SPF 5 | .500" | 35% 623 / 1452 | 2075 L | 1.25D+1.5L | | |

Analysis Results

| Actual | Location | Allowed | Capacity | Comb. | Case |
|--------------------|--|---|---|--|---|
| 748 ft-lb | 1'3 3/4" | 17130 ft-lb | 0.044 (4%) | 1.25D+1.5L | L |
| 748 ft-lb | 1'3 3/4" | 12732 ft-lb | 0.059 (6%) | 1.25D+1.5L | L |
| 813 lb | 1'4 5/8" | 5798 lb | 0.140 (14%) | 1.25D+1.5L | L |
| 0.001 (L/28388) | 1'9" | 0.115 (L/360) | 0.010 (1%) | D | Uniform |
| 0.003 (L/12395) | 1'9 5/16" | 0.115 (L/360) | 0.030 (3%) | L | L |
| 0.005 (L/8628) | 1'9 3/16" | 0.172 (L/240) | 0.030 (3%) | D+L | L |
| | 748 ft-lb 748 ft-lb 813 lb 0.001 (L/28388) 0.003 (L/12395) | 748 ft-lb 1'3 3/4" 748 ft-lb 1'3 3/4" 813 lb 1'4 5/8" 0.001 1'9" (L/28388) 0.003 1'9 5/16" | 748 ft-lb 1'3 3/4" 17130 ft-lb 748 ft-lb 1'3 3/4" 12732 ft-lb 813 lb 1'4 5/8" 5798 lb 0.001 1'9" 0.115 (L/360) (L/28388) 0.003 1'9 5/16" 0.115 (L/360) | 748 ft-lb 1'3 3/4" 17130 ft-lb 0.044 (4%) 748 ft-lb 1'3 3/4" 12732 ft-lb 0.059 (6%) 813 lb 1'4 5/8" 5798 lb 0.140 (14%) 0.001 1'9" 0.115 (L/360) 0.010 (1%) (L/28388) 0.003 1'9 5/16" 0.115 (L/360) 0.030 (3%) (L/12395) | 748 ft-lb 1'3 3/4" 17130 ft-lb 0.044 (4%) 1.25D+1.5L 748 ft-lb 1'3 3/4" 12732 ft-lb 0.059 (6%) 1.25D+1.5L 813 lb 1'4 5/8" 5798 lb 0.140 (14%) 1.25D+1.5L 0.001 1'9" 0.115 (L/360) 0.010 (1%) D (L/28388) 0.003 1'9 5/16" 0.115 (L/360) 0.030 (3%) L |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|-----------------|--------------|-----------|--------|---------|-------|-------|----------|
| 1 | Part. Uniform | 0-0-0 to 0-2-1 | | Тор | 1 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 2 | Point | 0-2-12 | | Тор | 535 lb | 1278 lb | 0 lb | 0 lb | C2 |
| 3 | Point | 1-3-12 | | Near Face | 196 lb | 454 lb | 0 lb | 0 lb | J7 |
| 4 | Point | 2-7-12 | | Near Face | 72 lb | 190 lb | 0 lb | 0 lb | J2 |
| 5 | Tie-In | 3-9-4 to 4-2-12 | (Span)2-3-15 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 6 | Point | 3-11-12 | | Near Face | 50 lb | 121 lb | 0 lb | 0 lb | J2 |

Continued on page 2...

Notes

NOtes
Calculated Shuchterd 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.

chemicale Handling & Installation

- 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 lateraty restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

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





Client:

Project: Address:

8/14/2018 Date:

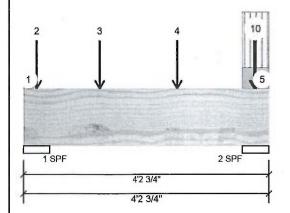
Designer: SB

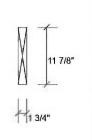
Job Name: SANDSTON 2A EL-2

Project #:

F2-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor





| Continued | from page 1 | | | | | | | |
|-----------|-------------|---------------------|------|--------|--------|------|------|------------------|
| ID | Load Type | Location Trib Width | Side | Dead | Live | Snow | Wind | Comments |
| 7 | Point | 4-0-0 | Тор | 187 lb | 448 lb | 0 lb | 0 lb | F4 F4 |
| 8 | Point | 4-0-0 | Тор | 41 lb | 109 lb | 0 lb | 0 lb | J3 |
| 9 | Point | 4-0-0 | Тор | 9 lb | 23 lb | 0 lb | 0 lb | J2 |
| 10 | Point | 4-0-0 | Тор | 94 lb | 0 lb | 0 lb | 0 lb | Wall Self Weight |
| | Self Weight | | | 5 PLF | | | | |

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.

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

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

chemicals

Handling & Installation

Handling & Installation

1. LVL beams must not be cut or drifted

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex

APA: PR-L318

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







Date: 8/14/2018 SB

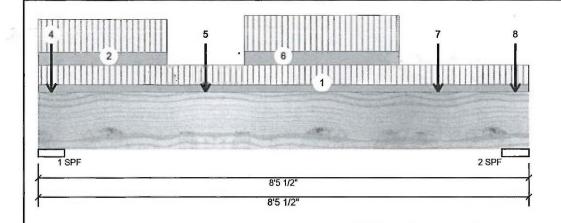
Designer: Job Name: SANDSTON 2A EL-2

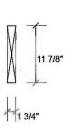
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





| Member Infor | mation | | 1014 1 400 | Unfactor | ed Reac | ions U | NPATTERNI | ED Ib (U | plift) | |
|-------------------|--------|----------------|----------------------|----------|---------|---------|--------------|----------|---------|------------|
| Туре: | Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snow | | Wind |
| Plies: | 1 | Design Method: | LSD | 1 | 2137 | | 870 | 0 | | 0 |
| Moisture Conditio | n: Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 1147 | | 455 | 0 | | 0 |
| Deflection LL: | 360 | Load Sharing: | No | | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | | | |
| General Load | | | | | | | | | | |
| Floor Live: | 40 PSF | | | Bearings | and Fac | tored F | Reactions | | | |
| Dead: | 15 PSF | | | Bearing | Length | Сар. | React D/L lb | Total Lo | d. Case | Ld. Comb. |
| | | | | 1-SPF | 5.500" | 72% | 1087 / 3205 | 4293 L | | 1.25D+1.5L |
| | | | | 2-SPF | 5.500" | 39% | 568 / 1721 | 2289 L | | 1.25D+1.5L |
| 1 . D | | | | | | | | | | |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|-----------|---------------|-------------|------------|---------|
| Moment | 4044 ft-lb | 4'2 7/16" | 17130 ft-lb | 0.236 (24%) | 1.25D+1.5L | L |
| Unbraced | 4044 ft-lb | 4'2 7/16" | 5865 ft-lb | 0.690 (69%) | 1.25D+1.5L | L |
| Shear | 2022 lb | 7' 7/8" | 5798 lb | 0.349 (35%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.022 (L/4218) | 4'2 9/16" | 0.256 (L/360) | 0.090 (9%) | D | Uniform |
| LL Defl inch | 0.055 (L/1672) | 4'2 9/16" | 0.256 (L/360) | 0.220 (22%) | L | L |
| TL Defl inch | 0.077 (L/1197) | 4'2 9/16" | 0.383 (L/240) | 0.200 (20%) | D+L | L |
| | | | | | | |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings.

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|-------------|---------------|------------------|------------|----------|--------|---------|-------|-------|------------------|
| 1 | Part, Uniform | 0-0-0 to 8-5-8 | | Тор | 38 PLF | 100 PLF | 0 PLF | 0 PLF | |
| 2 | Part. Uniform | 0-0-0 to 2-2-12 | | Far Face | 66 PLF | 170 PLF | 0 PLF | 0 PLF | |
| 3 | Point | 0-2-12 | | Тор | 1 lb | 0 lb | 0 lb | 0 lb | Wall Self Weight |
| 4 | Point | 0-2-12 | | Тор | 407 lb | 978 lb | 0 lb | 0 lb | F6 F6 |
| 5 | Point | 2-10-12 | | Far Face | 90 lb | 241 lb | 0 lb | 0 lb | J3 |
| 6 | Part. Uniform | 3-6-12 to 6-2-12 | | Far Face | 70 PLF | 185 PLF | 0 PLF | 0 PLF | |
| 7 | Point | 6-10-12 | | Far Face | 70 lb | 185 lb | 0 lb | 0 lb | J2 |
| ontinued on | page 2 | | | | | | | | |

Notes

Lumber

Handling & Installation

LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply (astening details, beam strength values, and code

approvals

Damaged Beams must not be used

Design assumes top edge is laterally restrained

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

For flat roofs provide proper drainage to prevent ponding

APA: PR-L318

Manufacturer Info

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



Page 2 of 2



Client: Project: Address: Date: 8/14/2018 Designer:

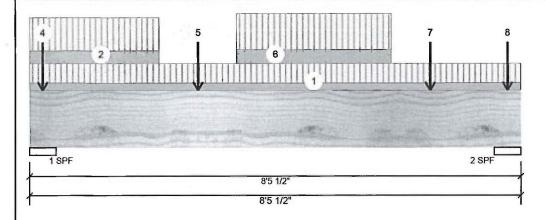
Job Name: SANDSTON 2A EL-2

Project #:

Forex 2.0E-3000Fb LVL F3-A

1.750" X 11.875" - PASSED

Level: Ground Floor



11 7/8"

.Continued from page 1

ID Load Type 8 Point

Self Weight

Location Trib Width 8-2-12

Side Far Face

Dead 61 lb

5 PLF

Live 162 lb Snow 0 lb Wind Comments

0 lb J2

NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY

Notes

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

Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire relardant or con

chemicals

Handling & Installation

- Handling & Installation

 1. LVL beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening fedelials, 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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex APA: PR-L318 Kott Lumber Company 14 Anderson Blvd, Ontario Capada L4A 7X4 905-642-4400





Client: Project: Address:

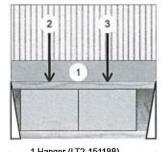
8/14/2018 Date: Designer: SB

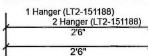
Job Name: SANDSTON 2A EL-2

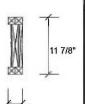
Project #:

2-Ply - PASSED NJ 11.875"

Level: Ground Floor







| Member Information | | | | | | |
|---------------------|--------|--|--|--|--|--|
| Type: | Girder | | | | | |
| Plies: | 2 | | | | | |
| Moisture Condition: | Dry | | | | | |
| Deflection LL: | 360 | | | | | |
| Deflection TL: | 240 | | | | | |
| Importance: | Normal | | | | | |

40 PSF 15 PSF Application: Floor (Residential) Design Method: **Building Code:** NBCC 2010 / OBC 2012

Load Sharing:

Deck: Not Checked Vibration: Not Checked

Unfactored Reactions UNPATTERNED Ib (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 333 | 125 | 0 | 0 |
| 2 | 303 | 113 | 0 | 0 |
| | | | | |

Bearings and Factored Reactions Cap. React D/L lb

Bearing Length

| 1 - | 2.000" | 24% | 156 / 500 | 656 | L | 1.25D+1.5L |
|---------------|--------|-----|-----------|-----|---|------------|
| Hanger | | | | | | |
| 2 - Hanger | 2.000" | 22% | 142 / 455 | 596 | L | 1.25D+1.5L |

Analysis Results

General Load

Floor Live:

Dead:

| Ī | Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---------------|--------------------|-----------|---------------|-------------|------------|---------|
| | Moment | 418 ft-lb | 1'8" | 9020 ft-lb | 0.046 (5%) | 1.25D+1.5L | L |
| | Unbraced | 418 ft-lb | 1'8" | 6861 ft-lb | 0.061 (6%) | 1.25D+1.5L | L |
| | Shear | 650 lb | 1 1/4" | 3400 lb | 0.191 (19%) | 1.25D+1.5L | L |
| | Perm Defl in. | 0.001 (L/33964) | 1'6 3/16" | 0.076 (1/360) | 0.010 (1%) | D | Uniform |
| | LL Defl inch | 0.002 (L/12714) | 1'6 3/16" | 0.076 (L/360) | 0.030 (3%) | L | L |
| | TL Defl inch | 0.003 (L/9251) | 1'6 3/16" | 0.115 (L/240) | 0.030 (3%) | D+L | L |

ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT

READ ALL NOTES ON THIS PAGE AND ON

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Total Ld. Case Ld. Comb.

Design Notes

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

| | | • | | | | | | | | |
|----|-----------|----------------|-------------|----------|--------|--------|-------|-------|----------|--|
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments | |
| 1 | Tie-In | 0-0-0 to 2-6-0 | (Span)1-3-7 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| 2 | Point | 0-8-0 | | Far Face | 102 lb | 273 lb | 0 lb | 0 lb | J6 | |
| 3 | Point | 1-8-0 | | Far Face | 112 lb | 299 lb | 0 lb | 0 lb | J6 | |

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and leadings shown. If is the responsibility of the customer and/or the cootractor to ensure the component suitability of the inlended application, and to verify the dimensions and loads.

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

Handling & Installation

- rianuling & Installation

 1. IJoist flanges must not be cut or drifted

 2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-pty 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.
- Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing lengther 3.5 inches
 For flat roofs provide proper drainage to prevent populing.

Manufacturer Info

Nascor by Kott

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





8/14/2018 Date:

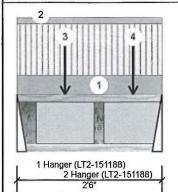
Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

2-Ply - PASSED NJ 11.875" F7-B

Level: Ground Floor





Wind

0

0

| 1 | 2'6" | , |
|---|------|---|
| | | |
| | | |

| Туре: | Girder |
|---------------------|--------|
| Plies: | 2 |
| Moisture Condition: | Dry |

Member Information

Deflection LL: 360 Deflection TL: 240 Importance: Normal General Load Floor Live: 40 PSF

15 PSF

Application: Floor (Residential) Design Method: LSD **Building Code:**

Deck:

Vibration:

Load Sharing:

NBCC 2010 / OBC 2012 No Not Checked

Not Checked

Brg Dead 304 151 2 367 186

Bearings and Factored Reactions

Hanger

Cap. React D/L lb Total Ld. Case Ld. Comb. Bearing Length 2.000" 24% 189 / 457 645 L 1.25D+1.5L Hanger 2 000" 29% 782 1 1 25D+1 5L 2 -232 / 550

Snow

0

Analysis Results

Dead:

| Γ | Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---------------|--------------------|----------|---------------|-------------|------------|---------|
| l | Moment | 452 ft-lb | 10" | 9020 ft-lb | 0.050 (5%) | 1.25D+1.5L | L |
| l | Unbraced | 452 ft-lb | 10" | 6861 ft-lb | 0.066 (7%) | 1.25D+1.5L | L |
| l | Shear | 777 lb | 2'4 3/4" | 3400 lb | 0.228 (23%) | 1.25D+1.5L | L |
| l | Perm Defl in. | 0.001 (L/25792) | 10 1/16" | 0.076 (L/360) | 0.010 (1%) | D | Uniform |
| ١ | LL Defi inch | 0.002 (L/12802) | 10 1/16" | 0.076 (L/360) | 0.030 (3%) | L | L |
| l | TL Defl inch | 0.003 (L/8555) | 10 1/16" | 0.115 (L/240) | 0.030 (3%) | D+L | L |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

Unfactored Reactions UNPATTERNED lb (Uplift)

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Design Notes

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

| a parrain nanga | brace at a carringo. | | | | | | | | |
|-----------------|----------------------|----------------|-------------|----------|--------|--------|-------|-------|----------|
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
| 1 | Tie-In | 0-0-0 to 2-6-0 | (Span)1-3-7 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Part. Uniform | 0-0-0 to 2-6-0 | | Тор | 3 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 3 | Point | 0-10-0 | | Far Face | 162 lb | 329 lb | 0 lb | 0 lb | J6 |
| 4 | Point | 2-0-0 | | Far Face | 143 lb | 278 lb | 0 lb | 0 lb | J6 |
| | | | | | | | | | |

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.

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

chemicals

Handling & Installation

- Handling & Installation

 1. Judis flanges must not be cut or driffed

 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 shealthing or as specified in engineering notes.

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

This design is valid until 7/10/2021

Manufacturer Info

Nascor by Kott

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







Date: 8/14/2018 Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

Brg

Bearing Length

Hanger

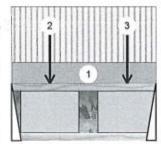
2 -Hanger 2.000"

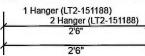
2.000"

11.875" F7-C NJ

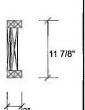
2-Ply - PASSED

Level: Ground Floor





Member Information



Wind

Ld. Comb.

1.25D+1.5L

1.25D+1.5L

| Girder | Application: | Floor (Residential) |
|--------|----------------------------------|---|
| 2 | Design Method: | LSD |
| Dry | Building Code: | NBCC 2010 / OBC 2012 |
| 360 | Load Sharing: | No |
| 240 | Deck: | Not Checked |
| Normal | Vibration: | Not Checked |
| | | |
| 40 PSF | | |
| 15 PSF | | |
| | 2 Dry 360 240 Normal | 2 Design Method: Dry Building Code: 360 Load Sharing: 240 Deck: Normal Vibration: |

| 2 | | | | |
|---|-----|-----|---|---|
| 4 | 288 | 108 | 0 | 0 |
| | | | | |
| | | | | |
| | | | | |

124 / 398

135 / 432

Cap. React D/L lb

Dead

Snow

Total Ld. Case

522 L

567 L

Unfactored Reactions UNPATTERNED Ib (Uplift)

Live

| Analysis Res | Analysis Results | | | | | | | | | |
|---------------|--------------------|----------|---------------|-------------|------------|---------|--|--|--|--|
| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case | | | | |
| Moment | 281 ft-lb | 7 15/16" | 9020 ft-lb | 0.031 (3%) | 1.25D+1.5L | L | | | | |
| Unbraced | 281 ft-lb | 7 15/16" | 6861 ft-lb | 0.041 (4%) | 1.25D+1.5L | L | | | | |
| Shear | 562 lb | 2'4 3/4" | 3400 lb | 0.165 (17%) | 1.25D+1.5L | L | | | | |
| Perm Defl in. | 0.001 (L/50498) | 11 3/4" | 0.076 (L/360) | 0.010 (1%) | D | Uniform | | | | |
| LL Defl inch | 0.001 (L/18899) | 11 3/4" | 0.076 (L/360) | 0.020 (2%) | L | L | | | | |
| TL Defl inch | 0.002 | 11 3/4" | 0.115 (L/240) | 0.020 (2%) | D+L | L | | | | |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

19%

21%

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

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

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|-----------|----------------|-------------|-----------|--------|--------|-------|-------|----------|
| 1 | Tie-In | 0-0-0 to 2-6-0 | (Span)1-3-7 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Point | 0-7-15 | | Near Face | 95 lb | 254 lb | 0 lb | 0 lb | J5 |
| 3 | Point | 1-11-15 | | Near Face | 88 lb | 235 lb | 0 lb | 0 lb | J5 |

Notes

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

Lumber

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

Handling & Installation

- Handling & Installation

 1. IJoist flarges 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 lobists must not be used

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

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

Manufacturer Info

Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario L4A7X4 905-642-4400





Date: 8/14/2018 Designer: SB

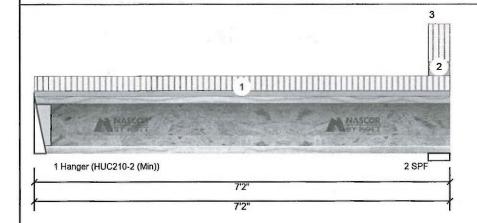
Job Name: SANDSTON 2A EL-2

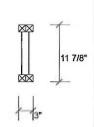
Project #:

11.875" NJ F8-A

2-Ply - PASSED

Level: Ground Floor





Ld. Comb.

1.25D+1.5L

1.25D+1.5L

| Type: | Girder | Application: |
|--------------------|---------|----------------|
| Plies: | 2 | Design Method |
| Moisture Condition | on: Dry | Building Code: |
| Deflection LL: | 360 | Load Sharing: |
| Deflection TL: | 240 | Deck: |
| Importance: | Normal | Vibration: |
| General Load | | |
| Floor Live: | 40 PSF | |
| Dead: | 15 PSF | |

Unfactored Reactions UNPATTERNED Ib (Uplift) Brg Live Wind Dead Snow 82 31 0 0 2 107 41 0 0

51 / 161

212 L

Bearings and Factored Reactions Bearing Length Cap. React D/L lb Total Ld. Case 2.500" 6% 38 / 123 161 L

Hanger

2-SPF 4.375"

Analysis Results Analysis Actual Location Allowed Capacity Comb. Case 259 ft-lb 3'6 1/16" 9020 ft-lb 0.029 (3%) 1.25D+1.5L L Moment 259 ft-lb 3'6 1/16" 1010 ft-lb 0.256 (26%) 1.25D+1.5L L Unbraced 162 lb 6'10 3/8" 3400 lb 0.048 (5%) 1.25D+1.5L L Shear 3'6 1/8" 0.224 (L/360) 0.010 (1%) D Uniform Perm Defl in. 0.001 (L/66000)LL Defl inch 0.003 3'6 1/8" 0.224 (L/360) 0.010 (1%) L

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

TL Defl inch 0.004 (L/18002) Design Notes

REFER TO MULTIPLE MEMBER TO MEMBER

CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH

OPROFESSIONAL S N.A. EL-MASRI Aug 20, 2018

BLOCK IS REQUIRED AT ALL 1 Fill all hanger nailing holes. POINT LOADS OVER BEARINGS. 2 Girders are designed to be supported on the bottom edge only. 3 Multiple plies must be fastened together as per manufacturer's details.

3'6 1/8" 0.336 (L/240) 0.010 (1%) D+L

4 Top loads must be supported equally by all plies. 5 Top flange braced at bearings.

6 Bottom flange braced at bearings.

(L/24754)

7 Web stiffeners required at Bearing 1

| 1 AACD SE | menera required at Dearin | g i. | | | | | | | |
|-----------|---------------------------|------------------|-------------|------|--------|--------|-------|-------|----------|
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
| 1 | Tie-In | 0-0-0 to 7-2-0 | (Span)1-2-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 6-9-10 to 7-2-0 | (Span)3-0-4 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Part. Uniform | 6-9-10 to 6-11-2 | | Тор | 7 PLF | 0 PLF | 0 PLF | 0 PLF | |

Floor (Residential)

Not Checked Not Checked

NBCC 2010 / OBC 2012

LSD

Notes

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

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

Handling & Installation

Handling & Installation

1. Noist flanges must not be cut or drilled

2. Refer to latest copy of the Libist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

3. Damaged Uoists must not be used

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

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

Manufacturer Info

Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario 14A7X4 905-642-4400





8/14/2018

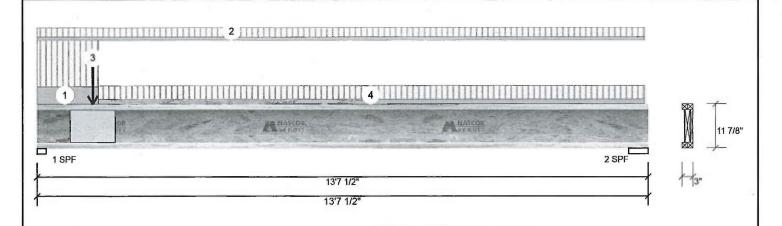
Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

11.875" 2-Ply - PASSED - NJ

Level: Ground Floor



| nation | | | Unfactored Reactions UNPATTERNED Ib (Uplift) | | | | | | |
|--------|-----------------------------|--|---|---|---|---|--|---|---|
| Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | W | Wind |
| 2 | Design Method: | LSD | 1 | 472 | | 177 | | 0 | 0 |
| Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 207 | | 78 | | 0 | 0 |
| 360 | Load Sharing: | No | | | | | | | |
| 240 | Deck: | Not Checked | | | | | | | |
| Normal | Vibration: | Not Checked | | | | | | | |
| | | | | | | | | | |
| 40 PSF | | | Bearing | s and Fac | tored | Reactions | | | |
| 15 PSF | | | Bearing | Length | Сар. | React D/L lb | Total | Ld. Case | Ld. Comb. |
| | | | 1 - SPF | 2.375" | 33% | 221 / 709 | 930 | L | 1.25D+1.5L |
| | | | 2-SPF | 5.250" | 12% | 97 / 311 | 408 | L | 1.25D+1.5L |
| | Girder 2 Dry 360 240 Normal | Girder Application: Design Method: Building Code: Load Sharing: Deck: Normal Vibration: 40 PSF 15 PSF | Girder Application: Floor (Residential) Design Method: LSD Building Code: NBCC 2010 / OBC 2012 Load Sharing: No Deck: Not Checked Vibration: Not Checked 40 PSF 15 PSF | Girder Application: Floor (Residential) 2 Design Method: LSD Dry Building Code: NBCC 2010 / OBC 2012 360 Load Sharing: No 240 Deck: Not Checked Normal Vibration: Not Checked 40 PSF 15 PSF Bearing: 1 - SPF 2 - SPF | Application: Floor (Residential) Brg Live | Application: Floor (Residential) Brg Live | Application: Floor (Residential) Brg Live Dead 1 472 177 177 179 | Application: Floor (Residential) Brg Live Dead Snor | Application: Floor (Residential) Brg Live Dead Snow |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case | |
|---------------|----------------|------------|---------------|-----------------|------------|---------|--|
| Moment | 1468 ft-lb | 5'9 1/4" | 9020 ft-lb | 0.163 (16%) | 1.25D+1.5L | L | |
| Unbraced | 1468 ft-lb | 5'9 1/4" | 1470 ft-lb | 0.998 (100%) | 1.25D+1.5L | L | |
| Shear | 912 lb | 1 5/8" | 3400 lb | 0.268 (27%) | 1.25D+1.5L | L | |
| Perm Defl in. | 0.020 (L/7818) | 6'4 13/16" | 0.437 (1/360) | 0.050 (5%) | D | Uniform | |
| LL Defl inch | 0.054 (L/2929) | 6'4 13/16" | 0.437 (1/360) | 0.120 (12%) | L | L | |
| TL Defl inch | 0.074 (L/2131) | 6'4 13/16" | 0.656 (L/240) | 0.110 (11%) | D+L | L | |
| | | | | | | | |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's defails.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 5'10" o.c.

5 Bottom flange braced at bearings.

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|-----------|-----------------|-------------|----------|--------|--------|-------|-------|----------|
| 1 | Tie-In | 0-0-0 to 1-4-6 | (Span)2-9-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-0-0 to 13-6-8 | (Span)0-6-9 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Point | 1-2-14 | | Far Face | 99 lb | 265 lb | 0 lb | 0 lb | F7 |
| 4 | Tie-In | 1-4-6 to 13-6-8 | (Span)0-9-7 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |

Notes

Calculated Shuchired Designs is responsible only of the shuchiral adequacy of this component based on the design criteria and loadings shown, II is the responsibility of the customer and/or the contractor to ensure the component suitability of the inlended application, and to verify the dimensions and loads.

Lumber

Handling & Installation

Handling & Installation

1. Joist flanges must not be cut or drilled

2. Refer to latest copy of the Lloist product information details for framing details, stiffener fables, web hole chart, bridging details, multi-ply fastering details and handling/erection details

3. Damaged bolists must not be used

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

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

Manufacturer Info

Nascor by Kott

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



Client: Project: Address: Date: 8/14/2018

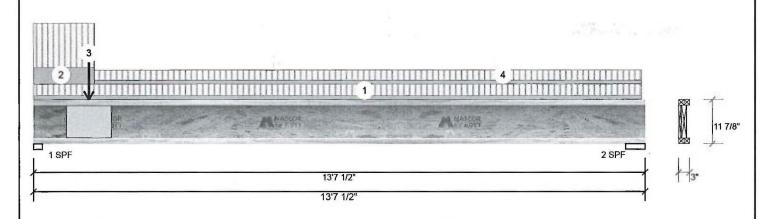
Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

11.875" 2-Ply - PASSED F9-B NJ

Level: Ground Floor



| Member Info | rmation | - 1 The second | HTIPLE | Unfactore | d Reacti | ons UNP | ATTERN | ED Ib (| (Uplift) | |
|------------------|---------|----------------|----------------------|------------|-----------|-----------|-----------|---------|----------|------------|
| Type: | Girder | Application: | Floor (Residential) | Brg | Live | De | ead | Snov | W | Wind |
| Plies: | 2 | Design Method: | LSD | 1 | 498 | | 187 | | 0 | 0 |
| Moisture Conditi | on: Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 209 | | 78 | | 0 | 0 |
| Deflection LL: | 360 | Load Sharing: | No | 4 - | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | | | |
| General Load | | | | _ | | | | | | |
| Floor Live: | 40 PSF | | | Bearings a | and Facto | ored Read | tions | | | |
| Dead: | 15 PSF | | | Bearing L | ength. | Cap. Rea | ct D/L lb | Total | Ld. Case | Ld. Comb. |
| | | | | 1-SPF 2 | .375" | 34% | 233 / 747 | 980 | L | 1.25D+1.5L |
| | | | | 2-SPF 5 | .250" | 12% | 98 / 314 | 412 | L | 1.25D+1.5L |
| malusia Dass | .[4 | | | | | | | | | |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|-----------|---------------|-------------|------------|---------|
| Moment | 1500 ft-lb | 5'8 5/16" | 9020 ft-lb | 0.166 (17%) | 1.25D+1.5L | L |
| Unbraced | 1500 ft-lb | 5'8 5/16" | 1511 ft-lb | 0.993 (99%) | 1.25D+1.5L | L |
| Shear | 961 lb | 1 5/8" | 3400 lb | 0.283 (28%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.021 (L/7646) | 6'4 5/8" | 0.437 (L/360) | 0.050 (5%) | D | Uniform |
| LL Defl inch | 0.055 (L/2867) | 6'4 5/8" | 0.437 (L/360) | 0.130 (13%) | L | L |
| TL Defl inch | 0.075 (L/2085) | 6'4 5/8" | 0.656 (L/240) | 0.120 (12%) | D+L | L |

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 5'9" o.c.

5 Bottom flange braced at bearings.

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.



| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments | |
|----|-----------|-----------------|-------------|-----------|--------|--------|-------|-------|----------|--|
| 1 | Tie-In | 0-0-0 to 13-6-8 | (Span)0-8-7 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| 2 | Tie-In | 0-0-0 to 1-4-6 | (Span)2-9-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| 3 | Point | 1-2-14 | | Near Face | 108 lb | 288 lb | 0 lb | 0 lb | F7 | |
| 4 | Tie-In | 1-4-6 to 13-6-8 | (Span)0-7-9 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| | | | | | | | | | | |

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

Lumber

Dry service conditions, unless noted otherwise
 Use to be treated with fire retardant or corrosive

chemicals

Handling & Installation

- Handling & Installation

 1. Joist flanges must not be cut or drilled

 2. Refer to latest copy of the Loist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-py testening details and handling/erection details

 3. Damaged bloists must not be used

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

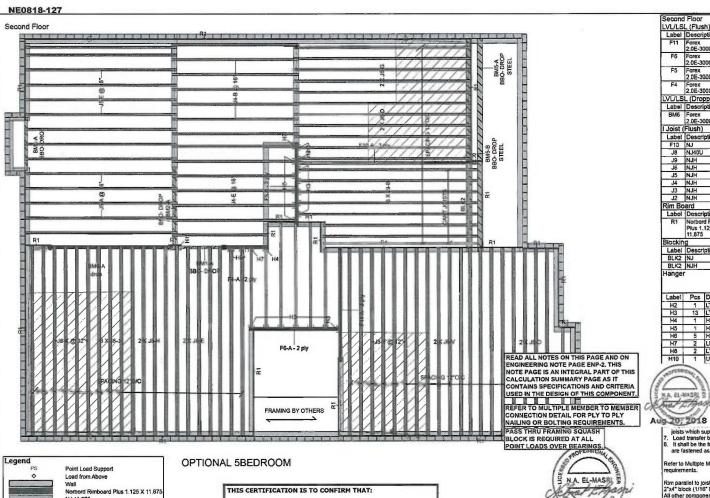
- Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeness for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Nascor by Kott

Kott Lumber Company 14 Anderson Blyd, Onlario L4A 7X4 905-642-4400





NJ 11.875 NJ40U 11.875 NJH 11.875 Forex 2.0E-3000Fb LVL 1.75 X 9.5 Forex 2.0E-3000Fb LVL 1.75 X 11.875 1.5 X 9.5 (Dropped) 1.75 X 9.5 (Oropped) 5.75 X 10.25 (Dropped)

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R 3. LVL CCMC -12904-R
- 4. CAN/CSA-086-09 5. CCMC -12787-R APA PR-L310(C) Version 18,40.162 Powered by IStruct[®]

1. THE LOADS USED IN THE CALCULATION OF THE ATTACHED APPROVED COMPONENTS CONFORM TO THE FLOOR ASSEMBLY SHOWN ON THIS LAYOUT.

2. THE FLOOR JOISTS COMPLY WITH THE NASCOR SPAN TABLE FOR THE LOADS AND SPACING SHOWN ON THIS LAYOUT.

THE FLOOR SYSTEM MUST BE ASSEMBLED IN ACCORDANCE TO THE NASCOR SPECIFIER GUIDE. MULTI-PLY MEMBERS MUST BE ATTACHED TOGETHER AS PER THE INCLUDED MULTIPLE MEMBER CONNECTION DETAIL.

ALL OTHER COMPONENTS AND STRUCTURAL ELEMENTS SUPPORTING THE FLOOR SYSTEM SUCH AS BEAMS, WALLS, **COLUMNS AND FOUNDATION WALLS AND FOOTINGS** INCLUDING ANCHORAGE OF COMPONENTS AND BRACING FOR LATERAL STABILITY ARE THE RESPONSIBILITY OF OTHERS.

This layout is to be used as an installation guide by. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS

CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR BLY TO PLY NAILING OR THE PLAN OF THE PLAN O POINT LOADS OVER BEARINGS.

| Second | | | | | | | | |
|-----------|--|-------|--------|-------|-------|--------|--------|---------------------------------|
| | L (Flush) | | | | | | | NASCO |
| | Description | Width | Depth | Qty | Plies | Pcs | Length | MASCO |
| F11 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | 1 | 2 | 2 | 12-0-0 | |
| F6 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | 1 | 2 | 2 | 10-0-0 | Layout Name SANDSTON 2A EL-2 |
| F5 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | 1 | 2 | 2 | 8-0-0 | Design Method |
| F4 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | 1 | 2 | 2 | 6-0-0 | Description |
| LVULS | L (Dropped) | | | | | | | GREENPARK HOMES |
| | Description | Width | Depth | Qty | Plies | Pcs | Length | MINISALE, BRAMPTON.ON |
| ВМб | Forex 2.0E-3000Fb LVL | 1.75 | 9.5 | 1 | 2 | 2 | 12-0-0 | Created June 29, 2018 |
| I Joist (| Flush) | | | | | | | Builder |
| Label | Description | Width | Depth | Qty | Plies | Pcs | Length | |
| F10 | NJ | 1.5 | 11.875 | 1 | 2 | 2 | 18-0-0 | Sales Rep |
| J8 | NJ40U | 3.5 | 11.875 | | | 39 | 18-0-0 | RM |
| J9 | NJH | 2.5 | 11.875 | | | 5 | 18-0-0 | Designer |
| J6 | NJH | 2.5 | 11.875 | | | 11 | 16-0-0 | SB |
| J5 | NJH | 2.5 | 11.875 | | | 17 | 14-0-0 | |
| J4 | NJH | 2.5 | 11.875 | | | 13 | 12-0-0 | Shipping |
| J3 | HLM | 2.5 | 11.875 | | | 5 | 10-0-0 | Project |
| J2 | NJH | 2.5 | 11.875 | | | 3 | 8-0-0 | Builder's Project |
| Rim Bo | pard | | | | | | | Kott Lumber Company |
| Label | Description | Width | Depth | Qty | Plies | Pcs | Length | 14 Anderson Blvd |
| R1 | Norbord Rimboard Plus 1.125 X 11.875 | 1.125 | 11.875 | | | 17 | 12 | Stouffville, Ontario Canada |
| Blockin | ng | | | | | | | L4A 7X4 |
| Label | Description | Width | Depth | Qty | Plies | Pcs | Length | 905-642-4400 |
| BLK2 | NJ | 1.5 | 11.875 | LinFt | | Varies | 1-0-0 | Second Floor |
| BLK2 | NJH | 2.5 | 11.875 | LinFt | | Varies | 6-0-0 | Dosign Method LS |
| Hange | r . | | | | | | | Building Code NBCC 2010 / OB |

| Hanger | | | | | Beam/Girder | Supported Member | Building Code Floor | NBCC 2010 / OBC 2012 |
|--------|-----|----------------|------|-------|-------------|---------------------|------------------------|----------------------|
| Label | Pcs | Description | Skew | Slope | fasteners | fasteners | Loads | |
| H2 | 1 | LT2-151188 | | | 4 10d | 2 10dx1 1/2 | Live | 40 |
| H3 | 13 | LT251188 | | | 4 10d | 2 10dx1 1/2 | Dead | 15 |
| H4 | 1 | HUC312 | | | 16 16d | | Deflection Jois | et |
| H5 | 1 | HGUS410 | | | 46 16d | 16 16d | LL Span L | 480 |
| H6 | 5 | HU310 | | | 14 16d | 6 10dx1 1/2 | TL Span L/ | 360 |
| H7 | 2 | LF2511 | | | 12 10d | 1 #8x1 1/4WS | | 480 |
| H8 | 2 | LT351188 | | | 4 10d | 2 10dx1 1/2 | LL Cant 2L/ | |
| 1240 | - | 1) Information | | | | | TL Cant 2L/ | 360 |

N.A. CL. MASSI

mensions on the architectural drawings.
equire filterbacker ply when supporting another
ce-mounted hanger.

a @ 24* ofe under parallel non-loadbearing walls.
ust window header along inside face of rimboerd/rimjoist
secti

joists which support loading from above exceeding two levels floor or roof.

Load transfer blocks to be installed under all point loads.

It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.

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

Rim parallel to joists: 1-1/8" rimboard with 2"x4" block (1/16" longer than rim depth) @ 16" o/c.
All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the esponsibility of others,

Hatch area represents ceramic tiled floor with an additional dead load of 5 PSF.

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

JOISTS SPACING 16"O/C UNLESS NOTED OTHERWISE

PAGE 22 OF 47

ISD

360

240

480

360

OSB

5/8"

Nailed & Glued

Gypsum 1/2"

II Snan I/

TL Span L/

LL Cant 2L/

TL Cant 2L/

Decking

Thickness

Fastone

Vibration

Architectural Drawing Info

REGION DESIGN INC.

8700 DUFFERIN ST. CONCORD,ON L4K 4S6

Project # 17-04-07 Model: SANDSTONE 2A Date: JULY, 2018

Ceiling:

Deck

Deflection Girden



Client:

Project: Address: Date: 8/14/2018

Designer: SB

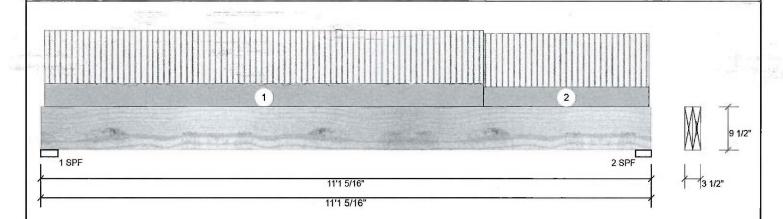
Job Name: SANDSTON 2A EL-2

Project #:

BM6-A Forex 2.0E-3000Fb LVL 1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor



| Member Infor | mation | | | Unfacto | red Reac | tions UN | PATTERN | ED lb (| Uplift) | |
|-------------------|--------|----------------|----------------------|---------|-----------|----------|--------------|---------|----------|------------|
| Type: | Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | N | Wind |
| Plies: | 2 | Design Method: | LSD | 1 | 1870 | | 838 | | 0 | 0 |
| Moisture Conditio | n: Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 1870 | | 795 | | 0 | 0 |
| Deflection LL: | 360 | Load Sharing: | No | - | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | | | |
| General Load | | | | | | | | | | |
| Floor Live: | 40 PSF | | | Bearing | s and Fac | tored Re | eactions | | | |
| Dead: | 15 PSF | | | Bearing | Length | Cap. F | React D/L lb | Total | Ld. Case | Ld. Comb. |
| | | | | 1 - SPF | 3.838" | 47% | 1048 / 2805 | 3853 | L, | 1.25D+1.5L |
| | | | | 2-SPF | 3.500" | 50% | 994 / 2805 | 3799 | L | 1.25D+1.5L |

Analysis Results

| | Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---------------|----------------|------------|---------------|-------------|------------|---------|
| | Moment | 9860 ft-lb | 5'6 11/16" | 22724 ft-lb | 0.434 (43%) | 1.25D+1.5L | L |
| | Unbraced | 9860 ft-lb | 5'6 11/16" | 20494 ft-lb | 0.481 (48%) | 1.25D+1.5L | L |
| | Shear | 3165 lb | 1' 9/16" | 9277 lb | 0.341 (34%) | 1.25D+1.5L | L |
| | Perm Defl in. | 0.094 (L/1361) | 5'6 11/16" | 0.354 (L/360) | 0.260 (26%) | D | Uniform |
| | LL Defl inch | 0.212 (L/603) | 5'6 7/8" | 0.354 (L/360) | 0.600 (60%) | L | L |
| | TL Defl inch | 0.305 (L/418) | 5'6 13/16" | 0.531 (L/240) | 0.570 (57%) | D+L | L |
| _ | | | | | | | |

Design Notes

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

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT **CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



ID Load Type Location Trib Width Side Dead Live Snow Wind Comments 1 Part. Uniform 0-0-13 to 8-0-13 Top 146 PLF 340 PLF 0 PLF 0 PLF 127 PLF 340 PLF 0 PLF 2 Part. Uniform 8-0-13 to 11-0-13 0 PLF Top Self Weight 8 PLF

Notes

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

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

Handling & Installation

andling & installation.

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA: PR-L318

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





Client: Project: Address: Date: 8/14/2018

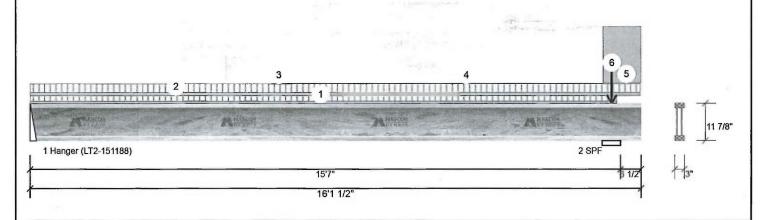
Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

2-Ply - PASSED 11.875"

Level: Second Floor



| Vlember Infor | mation | | | Unfacto | red Reac | tions U | NPATTERN | ED lb (| Uplift |
|-------------------|--------|----------------|----------------------|---------|-----------|---------|--------------|---------|--------|
| Туре: | Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | w |
| Plies: | 2 | Design Method: | LSD | 1 | 152 | | 58 | 0 (- | 1) |
| Moisture Conditio | n: Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 182 | | 236 | 9 | 5 |
| Deflection LL: | 360 | Load Sharing: | No | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | | |
| General Load | | | | | | | | | |
| Floor Live: | 40 PSF | | | Bearing | s and Fac | tored | Reactions | | |
| Dead: | 15 PSF | 1 | | Bearing | Length | Сар. | React D/L lb | Total | Ld. Ca |
| | | | | 1- | 2.000" | 11% | 72 / 229 | 301 | L_ |
| | | | | Hanger | | 9111 | 0.0000000 | | |

| Ana | lysis | Kes | ults | |
|-----|-------|-----|------|--|
| | | | | |

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|---------------------|------------|-------------------|-------------|------------|---------|
| Neg Moment | -62 ft-lb | 15'7" | 6765 ft-lb | 0.009 (1%) | 1.25D+1.5S | _L |
| Unbraced | -62 ft-lb | 15'7" | 6700 ft-lb | 0.009 (1%) | 1.25D+1.5S | _L |
| Pos Moment | 1121 ft-lb | 7'7 7/16" | 9020 ft-lb | 0.124 (12%) | 1.25D+1.5L | L_ |
| Unbraced | 1121 ft-lb | 7'7 7/16" | 1131 ft-lb | 0.991 (99%) | 1.25D+1.5L | L_ |
| Shear | 306 lb | 15'7" | 2550 lb | 0.120 (12%) | 1.25D+1.5S | _L |
| Perm Defl in. | 0.019 (L/9336) | 7'7 5/16" | 0.502 (L/360) | 0.040 (4%) | D | Uniform |
| LL Defl inch | 0.051 (L/3533) | 7'7 11/16" | 0,502 (L/360) | 0.100 (10%) | L | L_ |
| TL Defl inch | 0.071 (L/2563) | 7'7 1/2" | 0.753 (LJ240) | 0.090 (9%) | D+L | L_ |
| LL Cant | -0.005 (2L/2439) | Rt Cant | 0.200 (2L/480) | 0.027 (3%) | L | L_ |
| TL Cant | -0.007 (2L/1861) | Rt Cant | 0.300 (2L/360) | 0.023 (2%) | D+L | L_ |

Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange must be laterally braced at a maximum of 6'5" o.c.
- 6 Bottom flange must be laterally braced at a maximum of 6'3" o.c.

| 1 | 152 | 58 | 0 (-1) | 0 | |
|---|-----|-----|--------|---|--|
| 2 | 182 | 236 | 95 | 0 | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. | |
|---------------|--------|------|--------------|-------|----------|---------------------|--|
| 1 - Hanger | 2.000" | 11% | 72 / 229 | 301 | L_ | 1.25D+1.5L | |
| 2 - SPF | 5.750" | 18% | 295 / 320 | 615 | LL | 1.25D+1.5L +0.5S | |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Wind

Notes

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

Lumber

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

Handling & Installation

- Handling & Installation

 1. Noist flarges must not be cut or drilled

 2. Refer to latest copy of the Licels product information
 details for framing details, etiflener tables, web hole
 chart, bridging details, multi-ply fastening details and
 handling/erection details

 3. Damaged Loists must not be used

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

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

Manufacturer Info

Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario L4A7X4 905-642-4400





Page 2 of 2



Client: Project: Address: Date: 8/14/2018

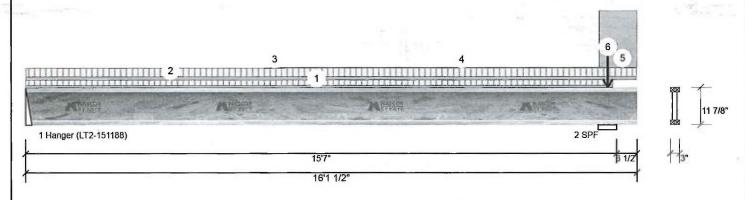
Designer: SB

Job Name: SANDSTON 2A EL-2

Project #:

11.875" 2-Ply - PASSED F10-A NJ

Level: Second Floor



| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|------------------|--------------|------|--------|--------|-------|-------|------------------|
| 1 | Tie-In | 0-0-0 to 15-5-14 | (Span)0-4-11 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-0-0 to 16-1-4 | (Span)0-7-5 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Tapered Start | 6-3-9 | | Тор | 0 PLF | 0 PLF | 0 PLF | 0 PLF | |
| | End | 6-10-3 | | | 1 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 4 | Part. Uniform | 6-10-3 to 15-4-9 | | Тор | 1 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 5 | Part. Uniform | 15-1-8 to 16-1-8 | | Тор | 80 PLF | 0 PLF | 0 PLF | 0 PLF | Wall Self Weight |
| 6 | Point | 15-4-4 | | Тор | 86 lb | 17 lb | 94 lb | 0 lb | F1 F1 |
| | | | | | | | | | |

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

Lumber

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

chemicals

Handling & Installation

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, stifferer tables, web hole
tohart, bridging details, multi-ply fastening details and
handling/erection details

3. Damsged bolists must not be used

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

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

Manufacturer Info

Nascor by Kott

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





Client: Project: Address: Date: 8/14/2018

Designer: SB

Job Name: SANDSTON 2A EL-2

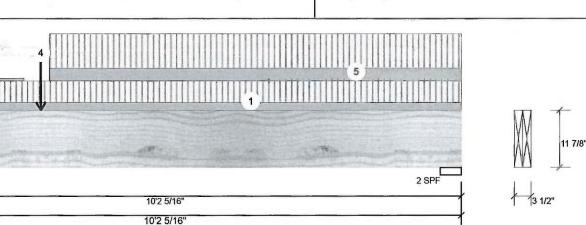
Level: Second Floor

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875"

2-Ply - PASSED



| Member Info | mation | | | Unfactor | ed React | ions U | NPATTERN | ED lb (Upl | lift) | |
|--------------------|--------|----------------|----------------------|----------|----------|--------|--------------|------------|-------|------------|
| Type: | Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snow | | Wind |
| Plies: | 2 | Design Method: | LSD | 1 | 613 | | 311 | 0 | | 0 |
| Moisture Condition | n: Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 387 | | 205 | 0 | | 0 |
| Deflection LL: | 360 | Load Sharing: | No | | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | | | |
| General Load | | | | | | | | | | |
| Floor Live: | 40 PSF | | | Bearings | and Fact | ored l | Reactions | | | |
| Dead: | 15 PSF | | | Bearing | Length | Сар. | React D/L lb | Total Ld. | Case | Ld. Comb. |
| | | | | 1 - SPF | 4.438" | 14% | 389 / 920 | 1309 L | | 1.25D+1.5L |
| | | | | 2-SPF | 4.375" | 9% | 256 / 580 | 836 L | | 1.25D+1.5L |

Analysis Results

1 SPF

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|------------|---------------|-------------|------------|---------|
| Moment | 3259 ft-lb | 2'11 7/16" | 34261 ft-lb | 0.095 (10%) | 1.25D+1.5L | L |
| Unbraced | 3259 ft-lb | 2'11 7/16" | 29988 ft-lb | 0.109 (11%) | 1.25D+1.5L | L |
| Shear | 1248 lb | 1'3 9/16" | 11596 lb | 0.108 (11%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.013 (L/8621) | 4'7 15/16" | 0.319 (L/360) | 0.040 (4%) | D | Uniform |
| LL Defl inch | 0.027 (L/4293) | 4'7 1/4" | 0.319 (L/360) | 0.080 (8%) | L | L |
| TL Defl inch | 0.040 (L/2866) | 4'7 7/16" | 0.479 (L/240) | 0.080 (8%) | D+L | L |
| | | | | | | |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

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

| Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|---------------|--|--|---|--|---|--|---|--|
| Tie-In | 0-0-0 to 10-2-5 | (Span)0-10-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| Part. Uniform | 0-0-0 to 2-7-15 | | Тор | 2 PLF | 0 PLF | 0 PLF | 0 PLF | |
| Point | 2-11-7 | | Far Face | 279 lb | 641 lb | 0 lb | 0 lb | F6 |
| Tie-In | 3-1-3 to 10-2-5 | (Span)1-4-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| Self Weight | | | | 10 PLF | | | | |
| | Tie-In Part. Uniform Point Tie-In | Tie-In 0-0-0 to 10-2-5 Part. Uniform 0-0-0 to 2-7-15 Point 2-11-7 Tie-In 3-1-3 to 10-2-5 | Tie-In 0-0-0 to 10-2-5 (Span)0-10-0 Part. Uniform 0-0-0 to 2-7-15 Point 2-11-7 Tie-In 3-1-3 to 10-2-5 (Span)1-4-0 | Tie-In 0-0-0 to 10-2-5 (Span)0-10-0 Top Part. Uniform 0-0-0 to 2-7-15 Top Point 2-11-7 Far Face Tie-In 3-1-3 to 10-2-5 (Span)1-4-0 Top | Tie-In 0-0-0 to 10-2-5 (Span)0-10-0 Top 15 PSF Part. Uniform 0-0-0 to 2-7-15 Top 2 PLF Point 2-11-7 Far Face 279 lb Tie-In 3-1-3 to 10-2-5 (Span)1-4-0 Top 15 PSF | Tie-In 0-0-0 to 10-2-5 (Span)0-10-0 Top 15 PSF 40 PSF Part. Uniform 0-0-0 to 2-7-15 Top 2 PLF 0 PLF Point 2-11-7 Far Face 279 lb 641 lb Tie-In 3-1-3 to 10-2-5 (Span)1-4-0 Top 15 PSF 40 PSF | Tie-In 0-0-0 to 10-2-5 (Span)0-10-0 Top 15 PSF 40 PSF 0 PSF Part. Uniform 0-0-0 to 2-7-15 Top 2 PLF 0 PLF 0 PLF Point 2-11-7 Far Face 279 lb 641 lb 0 lb Tie-In 3-1-3 to 10-2-5 (Span)1-4-0 Top 15 PSF 40 PSF 0 PSF | Tie-In 0-0-0 to 10-2-5 (Span)0-10-0 Top 15 PSF 40 PSF 0 PSF 0 PSF Part. Uniform 0-0-0 to 2-7-15 Top 2 PLF 0 PLF 0 PLF 0 PLF Point 2-11-7 Far Face 279 lb 641 lb 0 lb 0 lb Tie-In 3-1-3 to 10-2-5 (Span)1-4-0 Top 15 PSF 40 PSF 0 PSF 0 PSF |

Notes

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

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

chemicals

Handling & Installation

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA: PR-L318

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



8/14/2018

Designer: SB

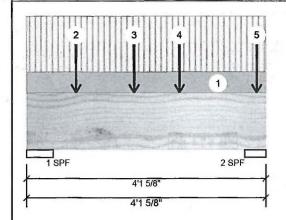
Job Name: SANDSTON 2A EL-2

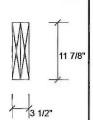
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





| Member Inform | nation | | | Unfactore | ed React | ions U | NPATTERN | ED lb (| Uplift) | |
|---------------------|--------|----------------|----------------------|------------|----------|---------|--------------|---------|----------|------------|
| Type: | Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | v | Wind |
| Plies: | 2 | Design Method: | LSD | 1 | 562 | | 231 | (| 0 | 0 |
| Moisture Condition: | Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 448 | | 187 | (| 0 | 0 |
| Deflection LL: | 360 | Load Sharing: | No | 1 - | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | 1 | | | | | | |
| General Load | | A.V2-5 | | | | | | | | |
| Floor Live: | 40 PSF | | | Bearings : | and Fact | tored F | Reactions | | | |
| Dead: | 15 PSF | | | Bearing L | ength | Сар. | React D/L lb | Total | Ld. Case | Ld. Comb. |
| | | | | 1 - SPF 5 | 5.500" | 10% | 289 / 843 | 1132 | L | 1.25D+1.5L |
| 1 | | | | 2-SPF 4 | 1.375" | 10% | 234 / 673 | 907 | L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|--------------------|-----------|---------------|------------|------------|---------|
| Moment | 908 ft-lb | 1'10 1/4" | 34261 ft-lb | 0.026 (3%) | 1.25D+1.5L | L |
| Unbraced | 908 ft-lb | 1'10 1/4" | 34261 ft-lb | 0.026 (3%) | 1.25D+1.5L | L |
| Shear | 1054 lb | 1'4 5/8" | 11596 lb | 0.091 (9%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.001 (L/47319) | 1'10 1/4" | 0.115 (L/360) | 0.010 (1%) | D | Uniform |
| LL Defl inch | 0.002 (L/19246) | 1'10 1/4" | 0.115 (L/360) | 0.020 (2%) | L | L |
| TL Defl inch | 0.003 (L/13681) | 1'10 1/4" | 0.172 (L/240) | 0.020 (2%) | D+L | L |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

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

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments | |
|----|-------------|-----------------|-------------|-----------|--------|--------|-------|-------|----------|--|
| 1 | Tie-In | 0-0-0 to 4-1-10 | (Span)1-1-7 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| 2 | Point | 0-10-4 | | Near Face | 124 lb | 331 lb | 0 lb | 0 lb | J8 | |
| 3 | Point | 1-10-4 | | Near Face | 115 lb | 306 lb | 0 lb | 0 lb | J8 | |
| 4 | Point | 2-7-12 | | Near Face | 56 lb | 150 lb | 0 lb | 0 lb | J2 | |
| 5 | Point | 3-11-12 | | Near Face | 49 lb | 131 lb | 0 lb | 0 lb | J2 | |
| | Self Weight | | | | 10 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 inlended application, and to verify the dimensions and loads.

Lumber

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

chemicals

Handling & Installation

Handling & Installation

1. UV, beams must not be cut or drilled

2. Rafer to manufacturer's product Infor-regarding installation requirements, mi fastening details, beam strength values, and approvals

3. Damaged Beams must not be used.

Design assumes top edge is laterally restrained Provide lateral support at bearing points to lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

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



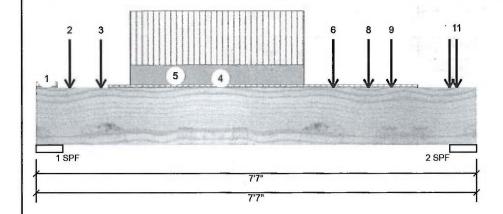
Date: 8/14/2018 Designer: SB

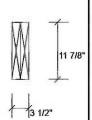
Job Name: SANDSTON 2A EL-2

Project #:

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

Level: Second Floor





| Member | Info | rma | tion |
|--------|------|-----|------|
|--------|------|-----|------|

Type: Girder Plies' Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal General Load Floor Live: 40 PSF

15 PSF

Floor (Residential) Application: Design Method: LSD NBCC 2010 / OBC 2012 Building Code: Load Sharing:

Not Checked Not Checked

Unfactored Reactions UNPATTERNED Ib (Uplift)

| Live | Dead | Snow | Wind |
|------------|-----------|---------------|---------------------|
| 961 (-73) | 371 | 0 (0) | 0 |
| 1185 (-32) | 486 | 0 (-1) | 0 |
| | 961 (-73) | 961 (-73) 371 | 961 (-73) 371 0 (0) |

Analysis Results

Dead:

Analysis Actual Location Allowed Capacity Comb. Case 3461 ft-lb 3'9 1/2" 34261 ft-lb 0.101 (10%) 1.25D+1.5L L Moment Unbraced 3461 ft-lb 3'9 1/2" 32115 ft-lb 0.108 (11%) 1.25D+1.5L L 0.202 (20%) 1.25D+1.5L L 2341 lb 6'2 3/8" 11596 lb Shear Perm Defl in. 0.008 3'9 5/8" 0.226 (L/360) 0.030 (3%) D Uniform (L/10507) LL Defl inch 0.020 (L/4160) 3'9 9/16" 0.226 (L/360) 0.090 (9%) L L TL Defl inch 0.027 (L/2980) 3'9 9/16" 0.340 (L/240) 0.080 (8%) D+L L

Deck:

Vibration:

Bearings and Factored Reactions

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. | |
|---------|--------|------|--------------|-------|----------|------------|--|
| 1 - SPF | 5.500" | 16% | 464 / 1442 | 1905 | L | 1.25D+1.5L | |
| 2 - SPF | 5.500" | 20% | 608 / 1777 | 2385 | L | 1.25D+1.5L | |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

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

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|------------------|--------------|-----------|---------|---------|-------|-------|----------|
| 1 | Tie-In | 0-0-0 to 0-4-6 | (Span)1-2-12 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Point | 0-6-15 | | Far Face | -17 lb | -46 lb | 0 lb | 0 lb | J4 |
| 3 | Point | 1-1-7 | | Near Face | 110 lb | 292 lb | 0 lb | 0 lb | J9 |
| 4 | Part. Uniform | 1-2-15 to 6-6-15 | | Far Face | -4 PLF | -11 PLF | 0 PLF | 0 PLF | |
| 5 | Part. Uniform | 1-7-7 to 4-7-7 | | Near Face | 114 PLF | 305 PLF | 0 PLF | 0 PLF | |
| 6 | Point | 5-1-7 | | Near Face | 92 lb | 245 lb | 0 lb | 0 lb | J9 |

Continued on page 2...

Notes

Calcutated 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 interest of the inte Lumber

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

chemicals

Handling & Installation

LYL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code

approvals

Damaged Beams must not be used

Design assumes top edge is laterally restrained

Provide lateral support at bearing points to
lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA: PR-1 318

Kott Lumber Company 14 Anderson Blvd, Onlario L4A7X4 905-642-4400





. NAME OF STREET



Project: Address: Date: 8/14/2018

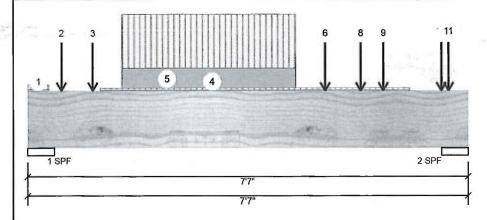
Designer: SB Job Name: SANDSTON 2A EL-2

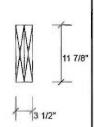
Project #:

Forex 2.0E-3000Fb LVL F5-A

1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





| Continued | from page 1 | | | | The Constitution | | | | |
|-----------|-------------|----------|------------|-----------|------------------|--------|-------|------|----------|
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
| 7 | Point | 5-8-12 | | Near Face | 58 lb | 152 lb | 0 lb | 0 lb | F10 |
| 8 | Point | 5-8-12 | | Near Face | 0 lb | 0 lb | -1 lb | 0 lb | F10 |
| 9 | Point | 6-1-7 | | Near Face | 88 lb | 213 lb | 0 lb | 0 lb | J6 |
| 10 | Point | 7-1-7 | | Near Face | 125 lb | 305 lb | 0 lb | 0 lb | J6 |
| 11 | Point | 7-2-15 | | Far Face | 5 lb | 15 lb | 0 lb | 0 lb | J4 |
| | Self Weight | | | | 10 PLF | | | | |
| | | | | | | | | | |

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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 neutre the component suitability of the intended application, and to verify the dimensions and loads. Lumber

chemicals

Handling & Installation

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. Damsged 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

Manufacturer Info

Forex APA; PR-L318

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





Client: Project: Address:

8/14/2018 Date:

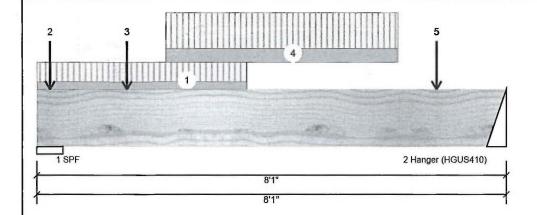
Designer: SB

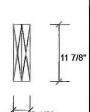
Job Name: SANDSTON 2A EL-2

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" 2-Ply - PASSED Level: Second Floor





Wind

0

0

Ld. Comb.

1.25D+1.5L

1.25D+1.5L

1311 L

| nation | | | Unfactor | red React | tions U | NPATTERN | ED lb (| Uplift) |
|--------|-------------------------------|--|--|---|---|---|--|---|
| Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | V |
| 2 | Design Method: | LSD | 1 | 978 | | 407 | | 0 |
| : Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 641 | | 279 | | 0 |
| 360 | Load Sharing: | No | | | | | | |
| 240 | Deck: | Not Checked | | | | | | |
| Normal | Vibration: | Not Checked | | | | | | |
| | | | | | | | | |
| 40 PSF | | | Bearings | and Fac | tored l | Reactions | | |
| 15 PSF | | | Bearing | Length | Сар. | React D/L lb | Total | Ld. Case |
| | | | 1 - SPF | 5.500" | 17% | 509 / 1467 | 1976 | L |
| | Girder 2 : Dry 360 240 Normal | Girder Application: 2 Design Method: Building Code: 360 Load Sharing: 240 Deck: Normal Vibration: | Girder Application: Floor (Residential) 2 Design Method: LSD Building Code: NBCC 2010 / OBC 2012 360 Load Sharing: No 240 Deck: Not Checked Normal Vibration: Not Checked | Girder Application: Floor (Residential) 2 Design Method: LSD 1 2 Building Code: NBCC 2010 / OBC 2012 360 Load Sharing: No 240 Deck: Not Checked Normal Vibration: Not Checked 40 PSF Bearings 15 PSF Bearing | Girder Application: Floor (Residential) Design Method: LSD 1 978 Building Code: NBCC 2010 / OBC 2012 Solution: No Deck: Not Checked Vibration: Not Checked Brg Live 1 978 2 641 40 PSF Bearings and Fac | Application: Floor (Residential) Brg Live | Application: Floor (Residential) Brg Live Dead | Application: Floor (Residential) Brg Live Dead Snow |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|--------------------|-------------|---------------|-------------|------------|---------|
| Moment | 2960 ft-lb | 3'9 1/16" | 34261 ft-lb | 0.086 (9%) | 1.25D+1.5L | L |
| Unbraced | 2960 ft-lb | 3'9 1/16" | 31702 ft-lb | 0.093 (9%) | 1.25D+1.5L | L |
| Shear | 1391 lb | 1'4 5/8" | 11596 lb | 0.120 (12%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.008 (L/11274) | 4' 1/16" | 0.247 (L/360) | 0.030 (3%) | D | Uniform |
| LL Defl inch | 0.019 (L/4745) | 3'11 7/8" | 0.247 (L/360) | 0.080 (8%) | L | L |
| TL Defl inch | 0.027 (L/3340) | 3'11 15/16" | 0.371 (L/240) | 0.070 (7%) | D+L | L |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS CALCULATION SUMMARY PAGE AS IT**

13%

348 / 962

NOTE PAGE IS AN INTEGRAL PART OF THIS CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

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

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments | |
|----|---------------|------------------|------------|----------|--------|---------|-------|-------|----------|--|
| 1 | Part. Uniform | 0-0-0 to 3-7-8 | | Тор | 38 PLF | 100 PLF | 0 PLF | 0 PLF | | |
| 2 | Point | 0-2-12 | | Far Face | 56 lb | 150 lb | 0 lb | 0 lb | J2 | |
| 3 | Point | 1-6-12 | | Far Face | 70 lb | 187 lb | 0 lb | 0 lb | J2 | |
| 4 | Part. Uniform | 2-2-12 to 6-2-12 | | Far Face | 69 PLF | 184 PLF | 0 PLF | 0 PLF | | |
| 5 | Point | 6-10-12 | | Far Face | 69 lb | 184 lb | 0 lb | 0 lb | J2 | |
| | Self Weight | | | | 10 PLF | | | | | |
| | | | | | | | | | | |

Notes

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

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

Handling & Installation

- 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 lateraty restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

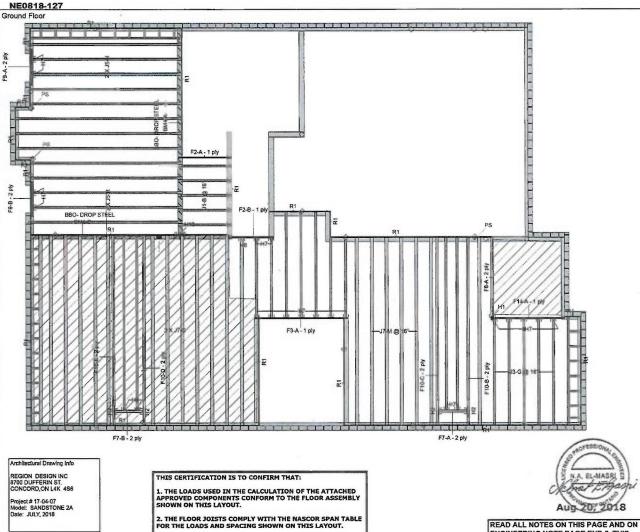
2 -

Hanger

4.000"

Manufacturer Info Forex APA: PR-L318

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



Pcs Length ayout Name 8-0-0 SANDSTON 2A EL-2 WOD

CONDITION

LSD Description

SB

Shipping

Canada L4A 7X4 905-842-4400 **Ground Floor** Design Method

Floor oads

Livo

Dead **Deflection Joist**

LL Span L/

TL Span L/

LL Cant 2L/

TL Cent 2L/ Deflection Girder

LL Span L/

Ti Span I/

LL Cant 2L/

TI. Cant 2L/

Decking

Thickness

Fastener

Vibration

Deck

Builder's Project

14 Anderson Blvd

Stouffville, Ontario

Kott Lumber Company

Building Code NBCC 2010 / OBC

LSD

40

15

480

360

480

360

360

240

480

360

OSB

3/4

Nailed & Glued

Design Method

GREENPARK HOMES

MINISALE, BRAMPTON, ON

PAGE 31 OF 47

2.0E-3000Fb LVI 1.75 6-0-0 Forex 2.0E-3000Fb LVL 4-0-0 F9 1.75 11.875 Forex 2.0E-3000Fb LVL l Joist Label Description Width Depth | Qty | Plies | Pcs | Length F10 NJ 15 11.875 4 2 8 18-0-0 2 8-0-0 Created 4 4-0-0 June 29, 2018 F8 NJ 1.5 11.875 F7 NJ J7 NJ60U 1.5 11.875 3.5 11.875 20 18-0-0 Builder 7 16-0-0 J6 NJH J5 NJH 2.5 11.875 2.5 11.875 11 14-0-0 Sales Rep

Qty

9 10-0-0 RM 4 8-0-0 Designer J2 NJH J1 NJH 2.5 11.875 2.5 11.875 5 6-0-0 Rim Board Width Depth Qty Plies Pcs Length Project Label Description
R1 Norbord Rimbs
Plus 1.125 X
11.875 1.125 11.875

2.5 11.875

Blocking Label Description
 Width
 Depth
 Qty
 Plies
 Pcs
 Length

 2.5
 11,875
 LinFt
 Varies
 23-0-0
 Varies 23-0-0

| 1 | | | | - Dourn Chock | Member | |
|-------|-----|----------------|------|---------------|--------------|-------------|
| Label | Pcs | Description | Skew | Slope | fastonors | fasteners |
| H1 | 1 | HUC210-2 (Min) | | | 14 10dx1 1/2 | 6 10d |
| H2 | 4 | LT2-151188 | | | 4 10d | 2 10dx1 1/2 |
| H7 | 22 | LT251188 | | | 4 10d | 2 10dx1 1/2 |
| H8 | 1 | LT351188 | | | 4 10d | 2 10dx1 1/2 |

NOTES:

Ground Floor

J3 NJH

Forex 2.0E-3000Fb LVL

LVL/LSI

Label

F14

- Framer to verify dimensions on the architectural drawings.
- Double joist only require filler/backer ply when supporting another

Hanger

- Datable plus they return emerioscen by when supposing actions member using a face-mounted hanger, install 2x4 blocking @ 2x1 oir under parallel non-loadbearnay walls install single-ply flusth window header along inside face of nimboard/rimjoist Refer to Nascor specifier guide for installation details. Squash blocks recommended to be installed at end bearing on all first level
- odusan blocks recommended to be installed at entrope and in instreet joists which support loading from above exceeding two levels floor or roof. Load transfer blocks to be installed under all point loads. It shall be the framer's responsibility that floor joists and beams
- are fastened as per the hanger manufacturer's standards.

Refer to Multiple Member Connection Detail to ply to ply nailing or boilting

Rim parallel to joists: 1-1/8" rimboard with 2"xif block (1/16" longer than rim depth) @ 16" o/c. All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.

Hatch area represents ceramic tiled floor with an additional dead load of 5 PSF.

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

egend



Point Load Support Load from Above Wall Norbord Rimboard Plus 1,125 X 11,875

NJ 11.875 NJ60U 11.875 NJH 11.875 Forex 2.0E-3000Fb LVL 1.75 X 11.875 5 25 X 10.25 (Dropped)

JOISTS SPACING 16"O/C NOTED OTHERWISE

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R
- 3. LVL CCMC -12904-R
- 4. CAN/CSA-086-09
- 5. CCMC -12787-R APA PR-L310(C)

Version 18.40.162 Powered by IStruct^{ne}

THE FLOOR SYSTEM MUST BE ASSEMBLED IN ACCORDANCE TO THE NASCOR SPECIFIER GUIDE. MULTI-PLY MEMBERS MUST BE ATTACHED TOGETHER AS PER THE INCLUDED MULTIPLE MEMBER CONNECTION DETAIL.

ALL OTHER COMPONENTS AND STRUCTURAL ELEMENTS SUPPORTING THE FLOOR SYSTEM SUCH AS BEAMS, WALLS, COLUMNS AND FOUNDATION WALLS AND FOOTINGS INCLUDING ANCHORAGE OF COMPONENTS AND BRACING FOR LATERAL STABILITY ARE THE RESPONSIBILITY OF OTHERS. ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL

POINT LOADS OVER BEARINGS.

This layout is to be used as an installation guide by. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them





Client: Project: Address: Date: 8/15/2018

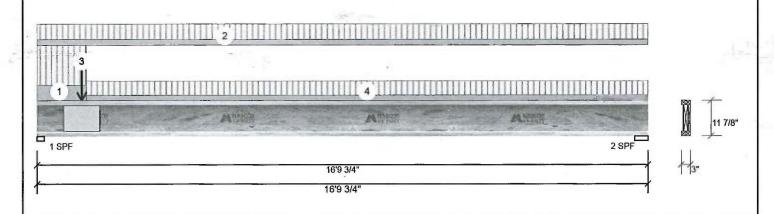
Designer: SB

Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

2-Ply - PASSED NJ 11.875" F10-B

Level: Ground Floor



| Member Inforn | nation | | | Unfactor | red Reac | tions U | NPATTERN | ED lb (| (Uplift) | |
|---------------------|--------|----------------|----------------------|----------|----------|---------|--------------|---------|----------|------------|
| Туре: | Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | W | Wind |
| Plies: | 2 | Design Method: | LSD | 1 | 663 | | 248 | | 0 | 0 |
| Moisture Condition: | Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 362 | | 136 | | 0 | 0 |
| Deflection LL: | 360 | Load Sharing: | No | 1.7 | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | | | |
| General Load | | | | | | | | | | |
| Floor Live: | 40 PSF | , T | | Bearings | and Fac | tored I | Reactions | | | |
| Dead: | 15 PSF | | | Bearing | Length | Сар. | React D/L lb | Total | Ld. Case | Ld. Comb. |
| | | | | 1-SPF | 2.375" | 46% | 310 / 994 | 1304 | L | 1.25D+1.5L |
| | | | | 2-SPF | 4.375" | 21% | 169 / 543 | 712 | L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|------------|---------------|-------------|------------|---------|
| Moment | 3007 ft-lb | 7'9 1/4" | 9020 ft-lb | 0.333 (33%) | 1.25D+1.5L | L |
| Unbraced | 3007 ft-lb | 7'9 1/4" | 3044 ft-lb | 0.988 (99%) | 1.25D+1.5L | L |
| Shear | 1284 lb | 1 5/8" | 3400 lb | 0.378 (38%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.061 (L/3211) | 8'1 11/16" | 0.546 (L/360) | 0.110 (11%) | D | Uniform |
| LL Defl inch | 0.163 (L/1203) | 8'1 11/16" | 0.546 (L/360) | 0.300 (30%) | L | L |
| TL Defl inch | 0.224 (L/875) | 8'1 11/16" | 0.819 (L/240) | 0.270 (27%) | D+L | L |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT **CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'3" o.c.

| 2 Rottom | nange braced at bearing | gs. | | | | | | | |
|----------|-------------------------|------------------|--------------|----------|--------|--------|-------|-------|----------|
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
| 1 | Tie-In | 0-0-0 to 1-4-6 | (Span)2-9-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-0-0 to 16-9-12 | (Span)1-0-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Point | 1-2-14 | | Far Face | 113 lb | 303 lb | 0 lb | 0 lb | F7 |
| 4 | Tie-In | 1-4-6 to 16-9-12 | (Span)0-11-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |

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

Lumber

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

chemicals

Handling & Installation

andling & Installation

I Joist flanges must not be cut or drilled

Refer to latest copy of the Joist product information
details for framing details, stiffener tables, web hole
chart, bridging details, multi-ply fastering details and
handling/erector details

Damaged Joists must not be used

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

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

Manufacturer Info

Nascor by Kott

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



Client:

Project: Address: Date: 8/15/2018

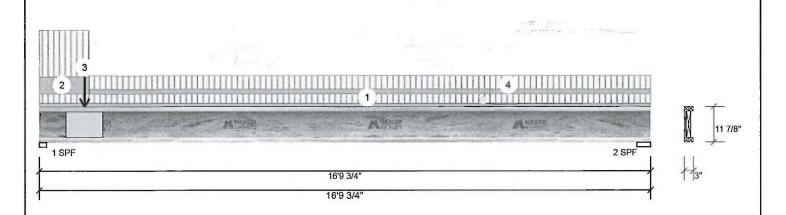
Designer: SB

Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

11.875" 2-Ply - PASSED F10-C NJ

Level: Ground Floor



| lember Info | rmation | | | Unfactored | React | ons UNPATTER | NED lb (Uplift) | |
|--------------------|---------|----------------|----------------------|-------------|---------|------------------|-----------------|------------|
| Туре: | Girder | Application: | Floor (Residential) | Brg | Live | Dead | Snow | Wind |
| Plies: | 2 | Design Method: | LSD | 1 | 584 | 219 | 0 | 0 |
| Moisture Condition | on: Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 251 | 94 | 0 | 0 |
| Deflection LL: | 360 | Load Sharing: | No | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | |
| General Load | | | | | | | | |
| Floor Live: | 40 PSF | | | Bearings a | nd Fact | ored Reactions | | |
| Dead: | 15 PSF | | | Bearing Le | ength | Cap. React D/L I | Total Ld. Case | Ld. Comb. |
| | | | | 1 - SPF 2.3 | 375" | 40% 274 / 87 | 6 1150 L | 1.25D+1.5L |
| | | | | 2-SPE 43 | 375" | 14% 118 / 37 | 6 493 I | 1.25D+1.5L |

Analysis Results

| | • | | | | | | |
|---|---------------|----------------|------------|---------------|-----------------|------------|---------|
| Γ | Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
| | Moment | 2173 ft-lb | 7'4 15/16" | 9020 ft-lb | 0.241 (24%) | 1.25D+1.5L | L |
| | Unbraced | 2173 ft-lb | 7'4 15/16" | 2175 ft-lb | 0.999 (100%) | 1.25D+1.5L | L |
| | Shear | 1133 lb | 1 5/8" | 3400 lb | 0.333 (33%) | 1.25D+1.5L | L |
| | Perm Defl in. | 0.044 (L/4417) | 8' 9/16" | 0.546 (L/360) | 0.080 (8%) | D | Uniform |
| | LL Defl inch | 0.119 (L/1657) | 8' 9/16" | 0.546 (L/360) | 0.220 (22%) | L | L |
| | TL Defl inch | 0.163 (L/1205) | 8' 9/16" | 0.819 (L/240) | 0.200 (20%) | D+L | L |
| | | | | | | | |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'11" o.c.

5 Bottom flange braced at bearings.

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|-----------|------------------|-------------|-----------|--------|--------|-------|-------|----------|
| 1 | Tie-In | 0-0-0 to 16-9-12 | (Span)0-6-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-0-0 to 1-4-6 | (Span)2-9-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Point | 1-2-14 | | Near Face | 125 lb | 333 lb | 0 lb | 0 lb | F7 |
| 4 | Tie-In | 1-4-6 to 16-9-12 | (Span)0-9-8 | Тор | 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 hiended application, and to verify the dimensions and loads. Lumber

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

chemicals

Handling & Installation

landling & Installation.

Loist flanges must not be cut or drilled.
Refer to latest copy of the Libist product information details for framing details, stiffener tables, web hole chart, bridging details, must heply fastening details and handling/erection details.

Damaged Libist must not be used.
Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Provide lateral support at bearing points to avoid lateral displacement and rotation.
 Web stiffeners for point load as shown Minimum point load bearing lengthr=3.5 inches
 To fair roofs provide proper drainage to prevent ponding.

Manufacturer Info

Nascor by Kott

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







Client:

Project: Address:

8/15/2018 Date:

Designer: SB

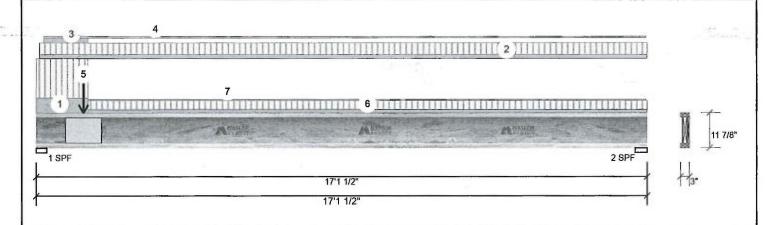
Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

NJ 11.875" F10-D

2-Ply - PASSED

Level: Ground Floor



| Member Inforn | Unfactored Reactions UNPATTERNED Ib (Uplift) | | | | | | | | | |
|---------------------|--|----------------|----------------------|----------|---------|---------|--------------|-------|----------|------------|
| Туре: | Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | v | Wind |
| Plies: | 2 | Design Method: | LSD | 1 | 643 | | 326 | | 0 | 0 |
| Moisture Condition: | Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 270 | | 139 | | 0 | 0 |
| Deflection LL: | 360 | Load Sharing: | No | | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | | | |
| General Load | | 10.2.500-0.7.5 | | | | | | | | |
| Floor Live: | 40 PSF | | | Bearings | and Fac | tored I | Reactions | | | |
| Dead: | 15 PSF | | | Bearing | Length | Сар. | React D/L lb | Total | Ld. Case | Ld. Comb. |
| | | | | 1-SPF | 3.500" | 42% | 407 / 965 | 1371 | L | 1.25D+1.5L |
| | | | | 2-SPF | 4.125" | 17% | 173 / 404 | 578 | L | 1,25D+1.5L |

| Δna | lysis | Resu | ts |
|---------------|-------|-------|----|
| ~11 14 | 13313 | 11634 | |

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|-----------|---------------|-------------|------------|---------|
| Moment | 2589 ft-lb | 7'7 3/8" | 9020 ft-lb | 0.287 (29%) | 1.25D+1.5L | L |
| Unbraced | 2589 ft-lb | 7'7 3/8" | 2628 ft-lb | 0.985 (99%) | 1.25D+1.5L | L |
| Shear | 1342 lb | 2 3/4" | 3400 lb | 0.395 (39%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.069 (L/2907) | 8'3 1/16" | 0.554 (L/360) | 0.120 (12%) | D | Uniform |
| LL Defl inch | 0.133 (L/1494) | 8'3 1/16" | 0.554 (L/360) | 0.240 (24%) | L | L |
| TL Defl inch | 0.202 (L/987) | 8'3 1/16" | 0.831 (L/240) | 0.240 (24%) | D+L | L |

Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'6" o.c.
- 5 Bottom flange braced at bearings.

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|------------------|-------------|----------|--------|--------|-------|-------|----------|
| 1 | Tie-In | 0-0-0 to 1-5-8 | (Span)2-9-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-1-2 to 17-1-8 | (Span)0-9-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Part. Uniform | 0-2-10 to 1-5-8 | | Тор | 7 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 4 | Part. Uniform | 0-2-11 to 17-1-1 | | Тор | 2 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 5 | Point | 1-4-0 | | Far Face | 186 lb | 367 lb | 0 lb | 0 lb | F7 |
| 6 | Tie-In | 1-5-8 to 17-1-8 | (Span)0-7-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 7 | Part. Uniform | 1-5-8 to 17-1-0 | | Тор | 2 PLF | 0 PLF | 0 PLF | 0 PLF | |
| | | | | | | | | | |

Notes

Natives

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

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

chemicals

Handling & Installation

Handling & Installation

1. Joist flanges must not be cut or drilled

2. Refer to latest copy of the Jloist product information details for framing details, stifferent tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

3. Damsged Unists must not be used

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

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

Manufacturer Info

Nascor by Kott

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



Client:

Project: Address:

8/15/2018 Date:

SB Designer:

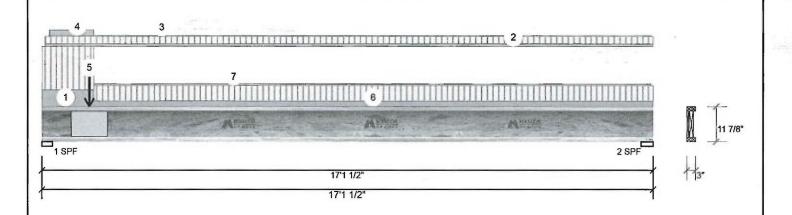
Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

11.875"

2-Ply - PASSED

Level: Ground Floor



| nation | Unfactored Reactions UNPATTERNED Ib (Uplift) | | | | | | | | |
|--------|--|--|--|--|---|---|--|---|---|
| Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | v | Wind |
| 2 | Design Method: | LSD | 1 | 575 | | 281 | (|) | 0 |
| Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 265 | | 128 | (|) | 0 |
| 360 | Load Sharing: | No | 1 - | | | | | | |
| 240 | Deck: | Not Checked | 1 | | | | | | |
| Normal | Vibration: | Not Checked | 1 | | | | | | |
| | | | | | | | | | |
| 40 PSF | | | Bearings | and Fac | tored Re | actions | | | |
| 15 PSF | | | Bearing L | ength | Cap. R | eact D/L lb | Total | Ld. Case | Ld. Comb. |
| | | | 1-SPF 3 | 3.500" | 38% | 352 / 863 | 1215 | L | 1.25D+1.5L |
| | | | 2-SPF 4 | 1.125" | 16% | 160 / 398 | 557 | L | 1.25D+1.5L |
| | Girder 2 Dry 360 240 Normal | Girder Application: Design Method: Dry Building Code: 100 Load Sharing: 100 Deck: 100 Vibration: 100 PSF 15 PSF | Girder Application: Floor (Residential) 2 Design Method: LSD Building Code: NBCC 2010 / OBC 2012 360 Load Sharing: No Deck: Not Checked Normal Vibration: Not Checked | Application: Floor (Residential) Brg | Application: Floor (Residential) Brg Live | Application: Floor (Residential) Brg Live 1 575 | Application: Floor (Residential) Brg Live Dead | Application: Floor (Residential) Brg Live Dead Snow | Application: Floor (Residential) Brg Live Dead Snow |

| Analysis | Results |
|----------|---------|
| | |

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|-----------|---------------|-------------|------------|---------|
| Moment | 2457 ft-lb | 7'9 1/16" | 9020 ft-lb | 0.272 (27%) | 1.25D+1.5L | L |
| Unbraced | 2457 ft-lb | 7'9 1/16" | 2478 ft-lb | 0.991 (99%) | 1.25D+1.5L | L |
| Shear | 1187 lb | 2 3/4" | 3400 lb | 0.349 (35%) | 1.25D+1.5L | L |
| Perm Defi in. | 0.062 (L/3202) | 8'3 7/16" | 0.554 (L/360) | 0.110 (11%) | D | Uniform |
| LL Defl inch | 0.129 (L/1550) | 8'3 1/2" | 0.554 (L/360) | 0.230 (23%) | L | L |
| TL Defl inch | 0.191 (L/1044) | 8'3 1/2" | 0.831 (L/240) | 0.230 (23%) | D+L | L |

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'8" o.c.

5 Bottom flange braced at bearings

| 3 DOLLOSTI | narige bracea at bearing | J | | | | | | | |
|------------|--------------------------|------------------|--------------|-----------|--------|--------|-------|-------|----------|
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
| 1 | Tie-In | 0-0-0 to 1-5-8 | (Span)2-9-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-1-2 to 17-1-8 | (Span)0-5-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Part. Uniform | 0-2-6 to 17-0-12 | | Тор | 1 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 4 | Part. Uniform | 0-2-8 to 1-5-8 | | Тор | 7 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 5 | Point | 1-4-0 | | Near Face | 151 lb | 304 lb | 0 lb | 0 lb | F7 |
| 6 | Tie-In | 1-5-8 to 17-1-8 | (Span)0-11-8 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 7 | Part. Uniform | 1-5-8 to 17-0-12 | | Тор | 2 PLF | 0 PLF | 0 PLF | 0 PLF | |
| | | | | | | | | | |

Notes

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

Lumber

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

Handling & Installation

Handling & Installation

1. Lidist flarges must not be cut or drilled

2. Refer to latest copy of the IJoist product information details for framing details, stifferent tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

3. Damaged lobists must not be used

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

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

Manufacturer Info

Nascor by Kott

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





Client:

Project: Address:

8/15/2018 Date:

Designer: SB

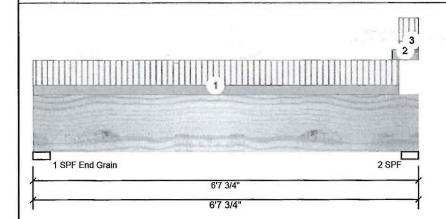
Job Name: SANDSTON 2A EL-2 WOD CONDITION

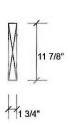
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





Wind

Ld. Comb.

1.25D+1.5L

N.A. EL-MASRI

Total Ld. Case

1329 L

| Type: | Girder | Application: | Floor (Residential) |
|--------------------|---------|----------------|----------------------|
| Plies: | 1 | Design Method: | LSD |
| Moisture Condition | on: Dry | Building Code: | NBCC 2010 / OBC 2012 |
| Deflection LL: | 360 | Load Sharing: | No |
| Deflection TL: | 240 | Deck: | Not Checked |
| Importance: | Normal | Vibration: | Not Checked |
| General Load | | | |
| Floor Live: | 40 PSF | | |
| Dead: | 15 PSF | i | |

Unfactored Reactions UNPATTERNED Ib (Uplift)

| DIG | LIVE | Dead | Onow | VIIII |
|-----|------|------|------|-------|
| 1 | 665 | 265 | 0 | 0 |
| 2 | 659 | 299 | 0 | 0 |
| | | | | |

Dead

Bearing Length Cap. React D/L lb 1-SPF 3.500" 29% 332 / 997

| Analysis Re | sults | | - 1 | | | | End Grain | | | | | | |
|-------------|-----------------|----------|----------------|-------------|------------|---------|-------------------------|---------|-----------|-------------|------|---|--------------|
| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case | 2-SPF | 3.500" | 36% | 374 / 988 | 1363 | L | 1.25D+1.5L |
| Moment | 1914 ft-lb | 3'3 7/8" | 17130 ft-lb | 0.112 (11%) | 1.25D+1.5L | L | READ A | LL NOTE | S ON THIS | PAGE AND | ON | | |
| Unbraced | 1914 ft-lb | 3'3 7/8" | 7267 ft-lb | 0.263 (26%) | 1.25D+1.5L | L | ENGINE | ERING N | OTE PAGE | ENP-2. THIS | 5 | | |
| Shear | 1230 lb | 5'5 1/8" | 5798 lb | 0.212 (21%) | 1.25D+1.5L | L | 14 (2005) 141 (100,000) | | | AL PART OF | THIS | | PROFESSIONAL |
| D D-6 : | 0.000 (1.00007) | 212 7/01 | 0.206 (1.1260) | 0.040 (40/) | D | Uniform | CALCUI | LAHONS | UMMARY | PAGE AS IT | | 1 | 18/ |

3'3 7/8" 7267 ft-lb 0.263 (26%) 1.25D+1.5L L 1914 ft-lb Unbraced 0.212 (21%) 1.25D+1.5L L 1230 lb 5'5 1/8" 5798 lb Perm Defl in. 0.008 (L/9867) 3'3 7/8" 0.206 (L/360) 0.040 (4%) D Uniform LL Defl inch 0.019 (L/3947) 3'3 7/8" 0.206 (L/360) 0.090 (9%) L L TL Defl inch 0.026 (L/2819) 3'3 7/8" 0.309 (L/240) 0.090 (9%) D+L L

1 Girders are designed to be supported on the bottom edge only.

CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT. REFER TO MULTIPLE MEMBER TO MEMBER

CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH

Bearings and Factored Reactions

| BLOCK IS REQUIRED AT ALL | |
|----------------------------|-----|
| POINT LOADS OVER BEARINGS. | Con |

| ID | Load Type | Location | Trib Width | Side | Dead | POINT LOA | DS OVER B | EARINGS. | Comments |
|----|---------------|------------------|------------|-----------|--------|-----------|-----------|----------|------------------|
| 1 | Part. Uniform | 0-0-0 to 6-3-12 | | Near Face | 75 PLF | 200 PLF | 0 PLF | 0 PLF | |
| 2 | Part. Uniform | 6-2-4 to 6-7-12 | | Тор | 80 PLF | 0 PLF | 0 PLF | 0 PLF | Wall Self Weight |
| 3 | Part. Uniform | 6-3-12 to 6-7-12 | | Тор | 69 PLF | 183 PLF | 0 PLF | 0 PLF | J3 |
| | Self Weight | | | | 5 PLF | | | | |

Design Notes

2 Top braced at bearings.

3 Bottom braced at bearings.

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

Lumber

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

chemicals

Handling & Installation

LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code

papervals

Damaged Beams must not be used

Design assumes top edge is laterally restrained

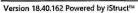
Provide lateral support at bearing points to avoid
lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent

Manufacturer Info Forex APA: PR-L318

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









Client:

Project: Address: Date:

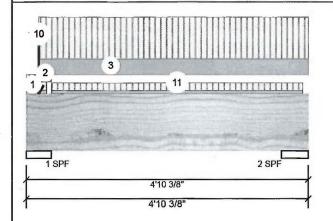
8/15/2018

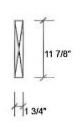
Designer: Job Name: SANDSTON 2A Et-2 WOD CONDITION

Project #:

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

Level: Ground Floor





| Michiger miles | manon | | | Omacion C | d Itcaction | o o i ii / i i Litii i | ED ID (Opinic) | |
|--------------------|--------|----------------|----------------------|------------|-------------|------------------------|----------------|------------|
| Type: | Girder | Application: | Floor (Residential) | Brg | Live | Dead | Snow | Wind |
| Plies: | 1 | Design Method: | LSD | 1 | 1809 | 813 | 0 | 0 |
| Moisture Condition | n: Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 231 | 98 | 0 | 0 |
| Deflection LL: | 360 | Load Sharing: | No | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | |
| General Load | | | | | | | | |
| Floor Live: | 40 PSF | | | Bearings a | and Factor | ed Reactions | | |
| Dead: | 15 PSF | | | Bearing L | ength C | ap. React D/L lb | Total Ld. Case | Ld. Comb. |
| | | İ | | 1-SPF 5 | .250" | 32% 1016 / 2714 | 3730 L | 1.25D+1.5L |
| | | | | 2-SPF 5 | .500" | 8% 123 / 346 | 469 L | 1.25D+1.5L |

Analysis Results

Member Information

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|--------------------|-----------|---------------|------------|------------|---------|
| Moment | 405 ft-lb | 2'5 1/16" | 17130 ft-lb | 0.024 (2%) | 1.25D+1.5L | L |
| Unbraced | 405 ft-lb | 2'5 1/16" | 10983 ft-lb | 0.037 (4%) | 1.25D+1.5L | L |
| Shear | 204 lb | 1'4 3/8" | 5798 lb | 0.035 (4%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.001 (L/49514) | 2'5 1/8" | 0.136 (L/360) | 0.010 (1%) | D | Uniform |
| LL Defl inch | 0.002 (L/21048) | 2'5 1/8" | 0.136 (L/360) | 0.020 (2%) | L | L |
| TL Defl inch | 0.003 (L/14770) | 2'5 1/8" | 0.205 (L/240) | 0.020 (2%) | D+L | L |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

Unfactored Reactions UNPATTERNED Ib (Uplift)

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings

| T DOMOIN | biaboa at bearings. | | | | | | | | |
|----------|---------------------|------------------|--------------|------|--------|---------|-------|-------|----------|
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
| 1 | Tie-In | 0-0-0 to 0-4-4 | (Span)0-9-15 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-0-0 to 0-5-4 | (Span)0-6-1 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Part. Uniform | 0-2-10 to 4-10-6 | | Тор | 30 PLF | 80 PLF | 0 PLF | 0 PLF | |
| 4 | Point | 0-2-10 | | Тор | 647 lb | 1489 lb | 0 lb | 0 lb | BM2 BM2 |
| 5 | Point | 0-2-10 | | Тор | 11 ib | 28 lb | 0 lb | 0 lb | J5 |
| 6 | Point | 0-2-10 | | Тор | 17 lb | 46 lb | 0 lb | 0 lb | J4 |
| | | | | | | | | | |

Continued on page 2...

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

Lumber

chemicals

Handling & Installation

LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code

restering details, occurs surrigin values, and code approvals.

Damaged Beams must not be used
Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid lateral displacement and rotation.

6. For flat roofs provide proper drainage to prevent

Manufacturer Info APA: PR-L318

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



Page 2 of 2



Client:

Project: Address:

8/15/2018 Date:

Designer: SB

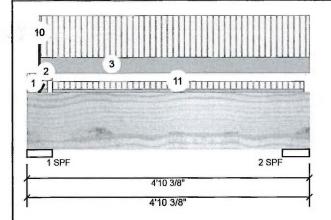
Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor



11 7/8"

| Continued | from page 1 | | - | | | | | | |
|-----------|-------------|----------------|-------------|------|--------|--------|-------|-------|------------------|
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
| 7 | Point | 0-2-10 | | Тор | 28 lb | 0 lb | 0 lb | 0 lb | Wall Self Weight |
| 8 | Point | 0-2-10 | | Тор | 7 lb | 19 lb | 0 lb | 0 lb | J5 |
| 9 | Point | 0-2-10 | | Тор | 4 lb | 11 lb | 0 lb | 0 lb | J4 |
| 10 | Point | 0-2-10 | | Тор | 6 lb | 0 lb | 0 lb | 0 lb | Wall Self Weight |
| 11 | Tie-In | 0-5-4 to 4-9-4 | (Span)0-9-1 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| | Self Weight | | | | 5 PLF | | | | |
| | | | | | | | | | |

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Notes

Calculated Shruchized 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 linened application, and to verify the dimensions and loads.

Lumber

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

Handling & Installation

- Handling & Installation

 1. LVI 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

Forex APA: PR-L318

Manufacturer Info



Client: Project: Address:

Date: 8/15/2018

Designer: SB

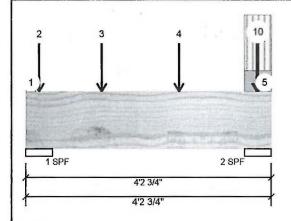
Job Name: SANDSTON 2A EL-2 WOD CONDITION

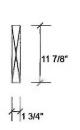
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





| nation | | | Uniactore | u Keacu | IOUS OL | ALALIEKIN | ן מו עב | opility | |
|--------|--------------------------------|--|--|---|---|--------------------------------------|--------------------------------------|---|---|
| Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | V | Wind |
| 1 | Design Method: | LSD | 1 | 1677 | | 714 | | 0 | 0 |
| : Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 968 | | 498 | | 0 | 0 |
| 360 | Load Sharing: | No | | | | | | | |
| 240 | Deck: | Not Checked | 1 | | | | | | |
| Normal | Vibration: | Not Checked | | | | | | | |
| | | | | | | | | | |
| 40 PSF | | | Bearings a | and Fact | ored R | eactions | | | |
| 15 PSF | | | Bearing L | ength. | Cap. F | React D/L lb | Total | Ld. Case | Ld. Comb. |
| | | | 1-SPF 5 | .500" | 60% | 892 / 2515 | 3407 | L | 1.25D+1.5L |
| | | | 2-SPF 5 | .500" | 35% | 623 / 1452 | 2075 | L | 1,25D+1.5L |
| | Girder 1 n: Dry 360 240 Normal | Girder Application: 1 Design Method: n: Dry Building Code: 360 Load Sharing: 240 Deck: Normal Vibration: 40 PSF 15 PSF | Girder Application: Floor (Residential) 1 Design Method: LSD Building Code: NBCC 2010 / OBC 2012 360 Load Sharing: No 240 Deck: Not Checked Normal Vibration: Not Checked 40 PSF 15 PSF | Girder Application: Floor (Residential) 1 Design Method: LSD 1 Design Method: LSD 360 Building Code: NBCC 2010 / OBC 2012 2 Load Sharing: No 240 Deck: Not Checked Normal Vibration: Not Checked 40 PSF 15 PSF Bearings & Bearings L 1 - SPF 5 2 - SPF 5 | Application: Floor (Residential) Brg Live | Application: Floor (Residential) 1 | Application: Floor (Residential) 1 | Application: Floor (Residential) Brg Live Dead Snow | Application: Floor (Residential) Brg Live Dead Snow |

Analysis Results

Member Information

| An | alysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|----|-------------|--------------------|-----------|---------------|-------------|------------|---------|
| Mo | ment | 748 ft-lb | 1'3 3/4" | 17130 ft-lb | 0.044 (4%) | 1.25D+1.5L | L |
| Un | braced | 748 ft-lb | 1'3 3/4" | 12732 ft-lb | 0.059 (6%) | 1.25D+1.5L | L |
| Sh | ear | 813 lb | 1'4 5/8" | 5798 lb | 0.140 (14%) | 1.25D+1.5L | L |
| Pe | rm Defl in. | 0.001 (L/28388) | 1'9" | 0.115 (L/360) | 0.010 (1%) | D | Uniform |
| LL | Defl inch | 0.003 (L/12395) | 1'9 5/16" | 0.115 (L/360) | 0.030 (3%) | L | L |
| TL | Defl inch | 0.005 (L/8628) | 1'9 3/16" | 0.172 (L/240) | 0.030 (3%) | D+L | L |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

Unfactored Poactions UNIDATTERNED Ib (Unlift)

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3), Assumed point load size; beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings.

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|--------------|---------------|-----------------|--------------|-----------|--------|---------|-------|-------|----------|
| 1 | Part. Uniform | 0-0-0 to 0-2-1 | | Тор | 1 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 2 | Point | 0-2-12 | | Тор | 535 lb | 1278 lb | 0 lb | 0 lb | C2 |
| 3 | Point | 1-3-12 | | Near Face | 196 lb | 454 lb | 0 lb | 0 lb | J7 |
| 4 | Point | 2-7-12 | | Near Face | 72 lb | 190 lb | 0 lb | 0 lb | J2 |
| 5 | Tie-In | 3-9-4 to 4-2-12 | (Span)2-3-15 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 6 | Point | 3-11-12 | | Near Face | 50 lb | 121 lb | 0 lb | 0 lb | J2 |
| 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

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

Handling & Installation

- tVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- approvals

 Damaged Beams must not be used

 Design assumes top edge is laterally restrained

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario 14A7X4 905-642-4400

Page 2 of 2

isDesign[™]

Client:

Project: Address: Date: 8/15/2018

Designer: SB

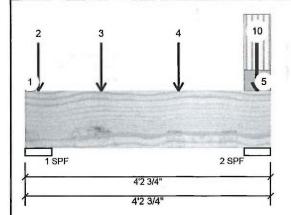
Job Name: SANDSTON 2A EL-2 WOD CONDITION

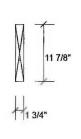
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor





| Continued fro | m page 1 | | | | | | | |
|---------------|-------------|---------------------|------|--------|--------|------|------|------------------|
| ID | Load Type | Location Trib Width | Side | Dead | Live | Snow | Wind | Comments |
| 7 | Point | 4-0-0 | Тор | 187 lb | 448 lb | 0 lb | 0 lb | F4 F4 |
| 8 | Point | 4-0-0 | Тор | 41 lb | 109 lb | 0 lb | 0 lb | J3 |
| 9 | Point | 4-0-0 | Тор | 9 lb | 23 lb | 0 lb | 0 lb | J2 |
| 10 | Point | 4-0-0 | Тор | 94 lb | 0 lb | 0 lb | 0 lb | Wall Self Weight |
| | Self Weight | | | 5 PLF | | | | |

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH

BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

Lumber

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

chemicals

- Handling & Installation

 1. LVL beam must not be cut or drilled

 2. Refer to manufactuer's product information regarding installation requirements. multi-ply fastening details, beam strength values, and code approvals

 3. Demaged Beams must not be used

 4. Design assumes top edge is lateraty restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info

APA: PR-L318







Client:

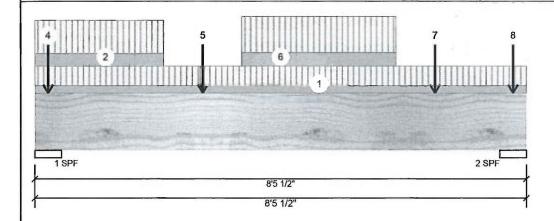
Project: Address: Date: 8/15/2018

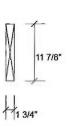
Designer: SB

Job Name: SANDSTON 2A EL-2 WOD-CONDITION

Project #:

Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED Level: Ground Floor





| liViember | Information |
|-----------|-------------|

| MICHIBEI IIIIO | mation | |
|--------------------|---------|----------------|
| Туре: | Girder | Application: |
| Plies: | 1 | Design Method: |
| Moisture Condition | on: Dry | Building Code: |
| Deflection LL: | 360 | Load Sharing: |
| Deflection TL: | 240 | Deck: |
| Importance: | Normal | Vibration: |
| General Load | | |
| Floor Live: | 40 PSF | |
| | | |

15 PSF

Unfactored Reactions UNPATTERNED Ib (Uplift)

| Live | Dead | Snow | Wind | |
|------|------|----------|------------|--------------|
| 2137 | 870 | 0 | 0 | |
| 1147 | 455 | 0 | 0 | |
| | 2137 | 2137 870 | 2137 870 0 | 2137 870 0 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---------|--------|------|--------------|-------|----------|------------|
| 1 - SPF | 5.500" | 72% | 1087 / 3205 | 4293 | L | 1.25D+1.5L |
| 2 - SPF | 5.500" | 39% | 568 / 1721 | 2289 | L | 1.25D+1.5L |

Analysis Results

Dead:

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|-----------|---------------|-------------|------------|---------|
| Moment | 4044 ft-lb | 4'2 7/16" | 17130 ft-lb | 0.236 (24%) | 1.25D+1.5L | L |
| Unbraced | 4044 ft-lb | 4'2 7/16" | 5865 ft-lb | 0.690 (69%) | 1.25D+1.5L | L |
| Shear | 2022 lb | 7' 7/8" | 5798 lb | 0.349 (35%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.022 (L/4218) | 4'2 9/16" | 0.256 (L/360) | 0.090 (9%) | D | Uniform |
| LL Defl inch | 0.055 (L/1672) | 4'2 9/16" | 0.256 (L/360) | 0.220 (22%) | L | L |
| TL Defl inch | 0.077 (L/1197) | 4'2 9/16" | 0.383 (L/240) | 0.200 (20%) | D+L | L |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.



Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size; beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.
- 4 Bottom braced at bearings.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

BLOCK IS REQUIRED AT ALL



| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|--------------|---------------|------------------|------------|----------|--------|---------|-------|-------|------------------|
| 1 | Part. Uniform | 0-0-0 to 8-5-8 | | Тор | 38 PLF | 100 PLF | 0 PLF | 0 PLF | |
| 2 | Part, Uniform | 0-0-0 to 2-2-12 | | Far Face | 66 PLF | 170 PLF | 0 PLF | 0 PLF | |
| 3 | Point | 0-2-12 | | Тор | 1 ib | 0 lb | 0 lb | 0 lb | Wall Self Weight |
| 4 | Point | 0-2-12 | | Тор | 407 lb | 978 lb | 0 lb | 0 lb | F6 F6 |
| 5 | Point | 2-10-12 | | Far Face | 90 lb | 241 lb | 0 lb | 0 lb | J3 |
| 6 | Part, Uniform | 3-6-12 to 6-2-12 | | Far Face | 70 PLF | 185 PLF | 0 PLF | 0 PLF | |
| 7 | Point | 6-10-12 | | Far Face | 70 lb | 185 lb | 0 lb | 0 lb | J2 |
| Continued on | page 2 | | | | | | | | |

Floor (Residential)

NBCC 2010 / OBC 2012

LSD

No Not Checked Not Checked

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 Lumber

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent

Manufacturer Info APA: PR-L318

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



Page 2 of 2



Client: Project: Address:

8/15/2018

Designer: SB

Job Name: SANDSTON 2A EL-2 WOD CONDITION

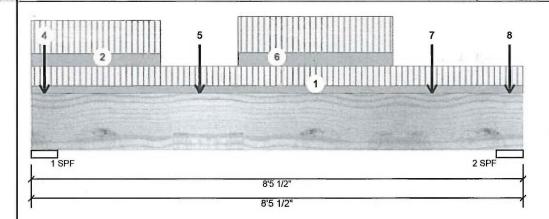
Project #:

Date:

Forex 2.0E-3000Fb LVL

1.750" X 11.875" - PASSED

Level: Ground Floor



11 7/8"

...Continued from page 1

ID Load Type 8 **Point** Self Weight 8-2-12

Location Trib Width

Side Far Face Dead 61 lb

Live 162 lb Snow

0 lb

Wind Comments 0 lb J2

5 PLF

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH **BLOCK IS REQUIRED AT ALL** POINT LOADS OVER BEARINGS.

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 applications and the profit the dimensions and least feet and the profit the dimensions and least feet.

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

chemicals

Handling & Installation

andling & Installation

LVL beams must not be cut or drilled

Refer to manufacturer's product Information regarding installation requirements, multi-ply festening details, beam strength values, and code approvals

Damaged Beams must not be used

Design assumes top edge is laterally restrained

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

For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info Forex APA: PR-L318





- m 177



Client: Project: Address: Date: 8/15/2018

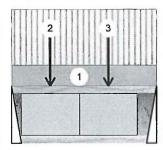
Designer: SB

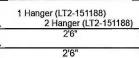
Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

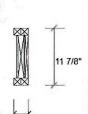
11.875" 2-Ply - PASSED NJ

Level: Ground Floor





15 PSF



| nation | | |
|--------|--|---|
| Girder | Application: | Floor (Residential) |
| 2 | Design Method: | LSD |
| Dry | Building Code: | NBCC 2010 / OBC 2012 |
| 360 | Load Sharing: | No |
| 240 | Deck: | Not Checked |
| Normal | Vibration: | Not Checked |
| | | |
| 40 PSF | | |
| | Girder 2 Dry 360 240 Normal | Girder Application: 2 Design Method: Dry Building Code: 360 Load Sharing: 240 Deck: Normal Vibration: |

Unfactored Reactions UNPATTERNED Ib (Uplift)

| Brg | Live | Dead | Snow | vvina |
|-----|------|------|------|-------|
| 1 | 333 | 125 | 0 | 0 |
| 2 | 303 | 113 | 0 | 0 |

Analysis Results

Dead:

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|--------------------|-----------|---------------|-------------|------------|---------|
| Moment | 418 ft-lb | 1'8" | 9020 ft-lb | 0.046 (5%) | 1.25D+1.5L | L |
| Unbraced | 418 ft-lb | 1'8" | 6861 ft-lb | 0.061 (6%) | 1.25D+1.5L | L |
| Shear | 650 lb | 1 1/4" | 3400 lb | 0.191 (19%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.001 (L/33964) | 1'6 3/16" | 0.076 (L/360) | 0.010 (1%) | D | Uniform |
| LL Defl inch | 0.002 (L/12714) | 1'6 3/16" | 0.076 (L/360) | 0.030 (3%) | L | L |
| TL Defl inch | 0.003 (L/9251) | 1'6 3/16" | 0.115 (L/240) | 0.030 (3%) | D+L | L |

Bearings and Factored Reactions

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---------------|--------|------|--------------|-------|----------|------------|
| 1 - Hanger | 2.000" | 24% | 156 / 500 | 656 | L | 1.25D+1.5L |
| 2 - Hanger | 2.000" | 22% | 142 / 455 | 596 | L | 1.25D+1.5L |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT** CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.

| O DOLLOTT | liange braced at bearings | | | | | | | | | |
|-----------|---------------------------|----------------|-------------|----------|--------|--------|-------|-------|----------|--|
| 1D | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments | |
| 1 | Tie-In | 0-0-0 to 2-6-0 | (Span)1-3-7 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| 2 | Point | 0-8-0 | | Far Face | 102 lb | 273 lb | 0 lb | 0 lb | J6 | |
| 3 | Point | 1-8-0 | | Far Face | 112 lb | 299 lb | 0 lb | 0 lb | J6 | |

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.

Dry service conditions, unless noted otherwise
 Uplist 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 I Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged IJoist must not be used

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

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

Manufacturer Info

Nascor by Kott

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





Client: Project: Address:

8/15/2018 Date:

Designer: SB

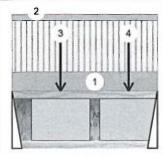
Job Name: SANDSTON 2A EL-2 WOD CONDITION

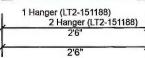
Project #:

11.875" NJ

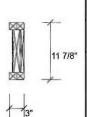
2-Ply - PASSED 575"

Level: Ground Floor





Member Information



| Type: | Girder | Application: | Floor (Residential) |
|--------------------|--------|----------------|----------------------|
| Plies: | 2 | Design Method: | LSD |
| Moisture Condition | Dry | Building Code: | NBCC 2010 / OBC 2012 |
| Deflection LL: | 360 | Load Sharing: | No |
| Deflection TL: | 240 | Deck: | Not Checked |
| Importance: | Normal | Vibration: | Not Checked |
| General Load | | | |
| Floor Live: | 40 PSF | | |
| Dead: | 15 PSF | | |

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 304 | 151 | 0 | 0 |
| 2 | 367 | 186 | 0 | 0 |
| | | | | |
| | | | | |
| | | | | |

Cap. React D/L lb

189 / 457

232 / 550

Unfactored Reactions UNPATTERNED lb (Uplift)

Analysis Results Location Allowed Capacity Comb. Case Analysis Actual 10" 9020 ft-lb 0.050 (5%) 1.25D+1.5L L 452 ft-lb Moment 452 ft-lb 10" 6861 ft-lb 0.066 (7%) 1.25D+1.5L L Unbraced 2'4 3/4" 3400 lb 0.228 (23%) 1.25D+1.5L L 777 lb Shear Perm Defl in. 0.001 10 1/16" 0.076 (L/360) 0.010 (1%) D Uniform (L/25792) LL Defl inch 0.002 10 1/16" 0.076 (L/360) 0.030 (3%) L L (L/12802)

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

24%

29%

Bearings and Factored Reactions

Bearing Length

Hanger

Hanger

2.000"

2 000"

REFER TO MULTIPLE MEMBER TO MEMBER TL Defl inch 0.003 (L/8555) 10 1/16" 0.115 (L/240) 0.030 (3%) D+L CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. **Design Notes**

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Ld. Comb.

1.25D+1.5L

1.25D+1.5L

Total Ld. Case

645 L

782 L

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.
- 6 Bottom flange braced at bearing

| o bottom narige | biacea at bearings. | | | | | | | | | |
|-----------------|---------------------|----------------|-------------|----------|--------|--------|-------|-------|----------|--|
| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments | |
| 1 | Tie-In | 0-0-0 to 2-6-0 | (Span)1-3-7 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | | |
| 2 | Part. Uniform | 0-0-0 to 2-6-0 | | Тор | 3 PLF | 0 PLF | 0 PLF | 0 PLF | | |
| 3 | Point | 0-10-0 | | Far Face | 162 lb | 329 lb | 0 lb | 0 lb | J6 | |
| 4 | Point | 2-0-0 | | Far Face | 143 lb | 278 lb | 0 lb | 0 lb | J6 | |

Notes

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

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

chemicals

Handling & Installation

amailing & Installation

Loist flanges must not be cut or driffed

Refer to latest copy of the Libist product information details for framing details, stiffener tables, web hole chart, bridging details, multiply fastening details and handling/erection details

Demaged Loists must not be used

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

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

Manufacturer Info

Nascor by Kott

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





Client: Project: Address:

8/15/2018 Date: Designer:

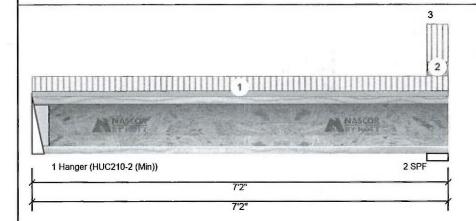
SB

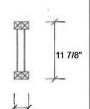
Job Name: SANDSTON 2A EL-2 WOD CONDITION

Project #:

NJ 11.875" 2-Ply - PASSED F8-A

Level: Ground Floor





| Member Information | | | | | | | |
|---------------------|--------|--|--|--|--|--|--|
| Туре: | Girder | | | | | | |
| Plies: | 2 | | | | | | |
| Moisture Condition: | Dry | | | | | | |
| Deflection LL: | 360 | | | | | | |
| Deflection TL: | 240 | | | | | | |
| Importance: | Normal | | | | | | |
| General Load | | | | | | | |
| Floor Live: | 40 PSF | | | | | | |
| Dead: | 15 PSF | | | | | | |

Application: Floor (Residential) Design Method: LSD **Building Code:** NBCC 2010 / OBC 2012 Load Sharing: Deck: Not Checked Not Checked Vibration:

Unfactored Reactions UNPATTERNED Ib (Uplift) Wind Brg Live Dead Snow 82 31 0 0 1 2 107 41 0 0

Bearings and Factored Reactions Cap. React D/L lb Total Ld. Case Bearing Length 38 / 123 161 I 2.500" 6% Hanger

1 25D+1 5I 2 - SPF 4.375" 6% 51 / 161 212 L 1.25D+1.5L

Analysis Results Case Analysis Actual Location Allowed Capacity Comb. 0.029 (3%) 1.25D+1.5L L Moment 259 ff-lb 3'6 1/16" 9020 ft-lb 0.256 (26%) 1.25D+1.5L L Unbraced 259 ft-lb 3'6 1/16" 1010 ft-lb 162 lb 6'10 3/8" 3400 lb 0.048 (5%) 1.25D+1.5L L Shear Perm Defl in, 0.001 3'6 1/8" 0.224 (L/360) 0.010 (1%) D Uniform (L/66000) LL Defl inch 0.003 3'6 1/8" 0.224 (L/360) 0.010 (1%) L (L/24754) 0.004 3'6 1/8" 0.336 (L/240) 0.010 (1%) D+L TL Defl inch L (L/18002)

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS **CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS



Ld Comb

Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.
- 6 Bottom flange braced at bearings.
- 7 Web stiffeners required at Bearing 1.

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|------------------|-------------|------|--------|--------|-------|-------|----------|
| 1 | Tie-In | 0-0-0 to 7-2-0 | (Span)1-2-0 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 6-9-10 to 7-2-0 | (Span)3-0-4 | Тор | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Part. Uniform | 6-9-10 to 6-11-2 | | Тор | 7 PLF | 0 PLF | 0 PLF | 0 PLF | |

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on his 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.

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

Handling & Installation

- Handling & Installation

 1. Joist Inages must not be cut or drilled

 2. Refer to latest copy of the Lioist product information
 details for framing details, sufferer tables, web hole
 chart, bridging details, multi-ply fastening details and
 handling/erection details

 3. Damaged Lioists must not be used
- Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
- Provide lateral support at bearing points to avoid lateral displacement and rotation
- Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 Inches
 For flat roofs provide proper drainage to prevent

Manufacturer Info

Nascor by Kott

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





Client: Project: Address: Date: 8/15/2018 Designer:

SB

Job Name: SANDSTON 2A EL-2 WOD CONDITION

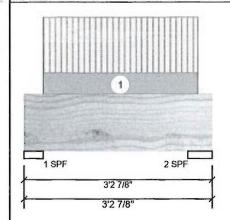
Project #:

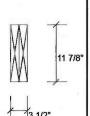
Forex 2.0E-3000Fb LVL

1.750" X 11.875"

2-Ply - PASSED

Level: Ground Floor





| Member Infort | mation | | | Unfactor | red Keac | tions U | NPATTEKNI | או מו עב | Uplitt) | | |
|--------------------|--------|----------------|----------------------|----------|----------|---------|--------------|----------|----------|------------|--|
| Туре: | Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | N | Wind | |
| Plies: | 2 | Design Method: | LSD | 1 | 330 | | 139 | (| 0 | 0 | |
| Moisture Condition | n: Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 372 | | 156 | (| 0 | 0 | |
| Deflection LL: | 360 | Load Sharing: | No | | | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | | | | |
| General Load | | | | | | | | | | | |
| Floor Live: | 40 PSF | | | Bearings | and Fac | tored F | Reactions | | | | |
| Dead: | 15 PSF | | | Bearing | Length | Сар. | React D/L lb | Total | Ld. Case | Ld. Comb. | |
| | | | | 1 - SPF | 3.954" | 8% | 174 / 495 | 668 | L | 1.25D+1.5L | |
| | | | | 2-SPF | 4.938" | 7% | 195 / 557 | 752 | L | 1.25D+1.5L | |

Analysis Results

Manalagy Information

| | Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---|---------------|--------------------|------------|---------------|------------|------------|------|
| | Moment | 456 ft-lb | 1'6 15/16" | 34261 ft-lb | 0.013 (1%) | 1.25D+1.5L | L |
| | Unbraced | 456 ft-lb | 1'6 15/16" | 34261 ft-lb | 0.013 (1%) | 1.25D+1.5L | L |
| 1 | Shear | 684 lb | 1'3 1/16" | 11596 lb | 0.059 (6%) | 1.25D+1.5L | L |
| | Perm Defl in. | 0.000 (L/999) | 0 | 999.000 (L/0) | 0.000 (0%) | | |
| | LL Defl inch | 0.001 (L/34463) | 1'7" | 0.087 (L/360) | 0.010 (1%) | L | L |
| | TL Defl inch | 0.001 (L/24395) | 1'7" | 0.131 (L/240) | 0.010 (1%) | D+L | L |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Hadastoned Deastions HNIDATTEDNED IL (Halife)

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

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

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|-------------------|------------|-----------|--------|---------|-------|-------|----------|
| 1 | Part. Uniform | 0-3-15 to 2-11-15 | | Near Face | 99 PLF | 263 PLF | 0 PLF | 0 PLF | |
| | Self Weight | | | | 10 PLF | | | | |

Notes

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

Lumber

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

chemicals

Handling & Installation

LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code

rastening details, beam strenger values, and code approvals

Damaged Beams must not be used

Design assumes top edge is laterally restrained

Provide (ateral support at bearing points to avoid lateral displacement and rotation

This design is valid until 7/10/2021

6. For flat roofs provide proper drainage to prevent

Manufacturer Info

APA: PR-L318







Client: Project: Address:

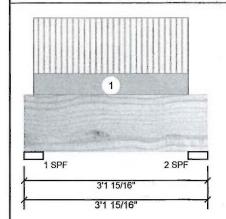
8/15/2018 Date: Designer:

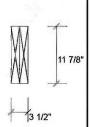
Job Name: SANDSTON 2A EL-2 WOD CONDITION

Forex 2.0E-3000Fb LVL 1.750" X 11.875" F9-B

2-Plv - PASSED

Level: Ground Floor





| Member Inform | P-1444 "" | Unfactored Reactions UNPATTERNED Ib (Uplift) | | | | | | | | |
|--------------------|-----------|--|----------------------|----------|---------|-------|--------------|-------|----------|------------|
| Type: | Girder | Application: | Floor (Residential) | Brg | Live | | Dead | Snov | W | Wind |
| Plies: | 2 | Design Method: | LSD | 1 | 373 | | 156 | | 0 | 0 |
| Moisture Condition | : Dry | Building Code: | NBCC 2010 / OBC 2012 | 2 | 328 | | 139 | | 0 | 0 |
| Deflection LL: | 360 | Load Sharing: | No | 1 | | | | | | |
| Deflection TL: | 240 | Deck: | Not Checked | | | | | | | |
| Importance: | Normal | Vibration: | Not Checked | | | | | | | |
| General Load | | | | | | | | | | |
| Floor Live: | 40 PSF | | | Bearings | and Fac | tored | Reactions | | | |
| Dead: | 15 PSF | | | Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
| | | | | 1 - SPF | 4.000" | 9% | 194 / 560 | 754 | L | 1.25D+1.5L |
| | | | | 2-SPF | 4.000" | 8% | 173 / 492 | 665 | L | 1.25D+1.5L |
| 4 1 ' D 1 | | | | | | | | | _ | |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|--------------------|-------------|---------------|------------|------------|------|
| Moment | 454 ft-lb | 1'6 15/16" | 34261 ft-lb | 0.013 (1%) | 1.25D+1.5L | L |
| Unbraced | 454 ft-lb | 1'6 15/16" | 34261 ft-lb | 0.013 (1%) | 1.25D+1.5L | L |
| Shear | 683 lb | 1'10 13/16" | 11596 lb | 0.059 (6%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.000 (L/999) | 0 | 999.000 (L/0) | 0.000 (0%) | | |
| LL Defl inch | 0.001 (L/34556) | 1'6 15/16" | 0.087 (L/360) | 0.010 (1%) | L | L |
| TL Defl inch | 0.001 (L/24462) | 1'6 15/16" | 0.131 (L/240) | 0.010 (1%) | D+L | L |

READ ALL NOTES ON THIS PAGE AND ON **ENGINEERING NOTE PAGE ENP-2. THIS** NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT **CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



Design Notes

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

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|------------------|------------|-----------|--------|---------|-------|-------|----------|
| 1 | Part. Uniform | 0-1-15 to 2-9-15 | | Near Face | 99 PLF | 263 PLF | 0 PLF | 0 PLF | |
| | Self Weight | | | | 10 PLF | | | | |

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Lumber

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

chemicals

Handling & Installation

Handling & Installation

1. LVL beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, mutil-ply fastering debails, beam strength values, end 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

For flat roofs provide proper drainage to prevent ponding

Forex APA: PR-L318

Manufacturer Info

Kott Lumber Company 14 Anderson Blvd, Onterio Canada 905-642-4400

