

Engineering Note Page (ENP-2)

REVISION 2009-10-09

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 only limited to the calculation of this building component for the loads and conditions shown on this drawing.

The responsibility of the undersigned is limited to the verification of the structural capacity of the 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

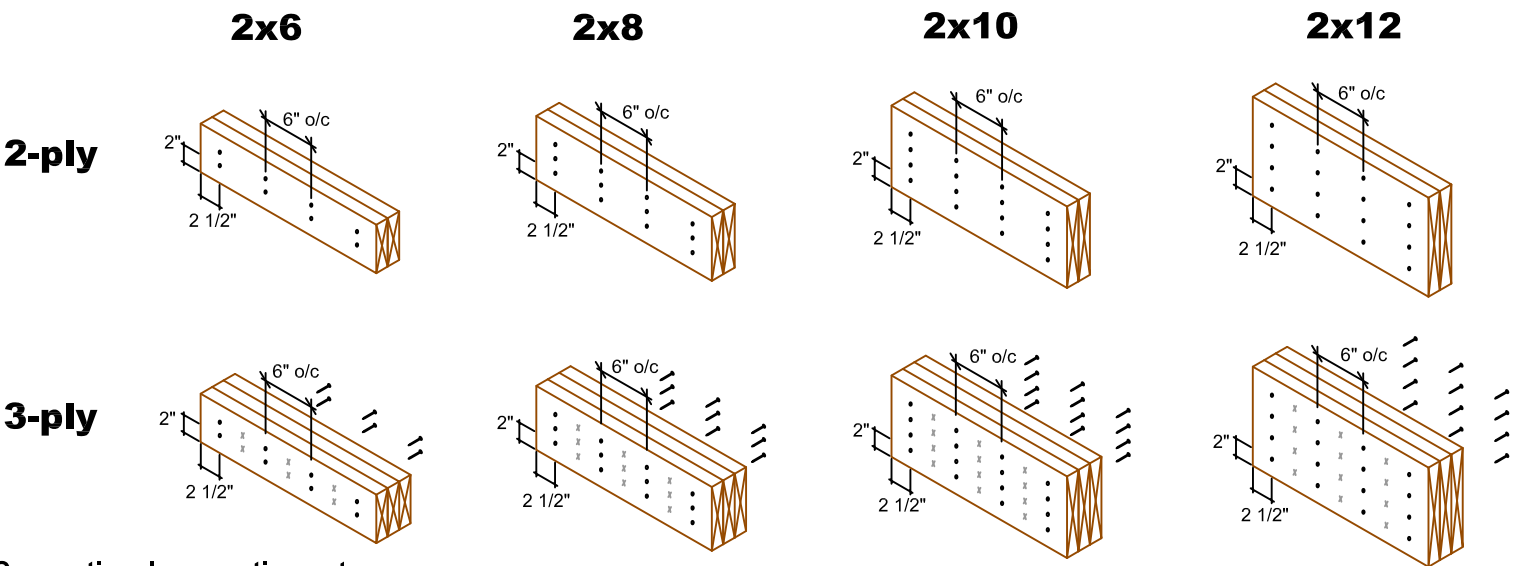
1. The building component used in construction must be the same as indicated on the drawings.
2. The building component must be installed and assembled as per specification shown on the drawing and in accordance with the manufacturer's assembly and installation.
3. Members consisting of multiple plies 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 pre-authorization.

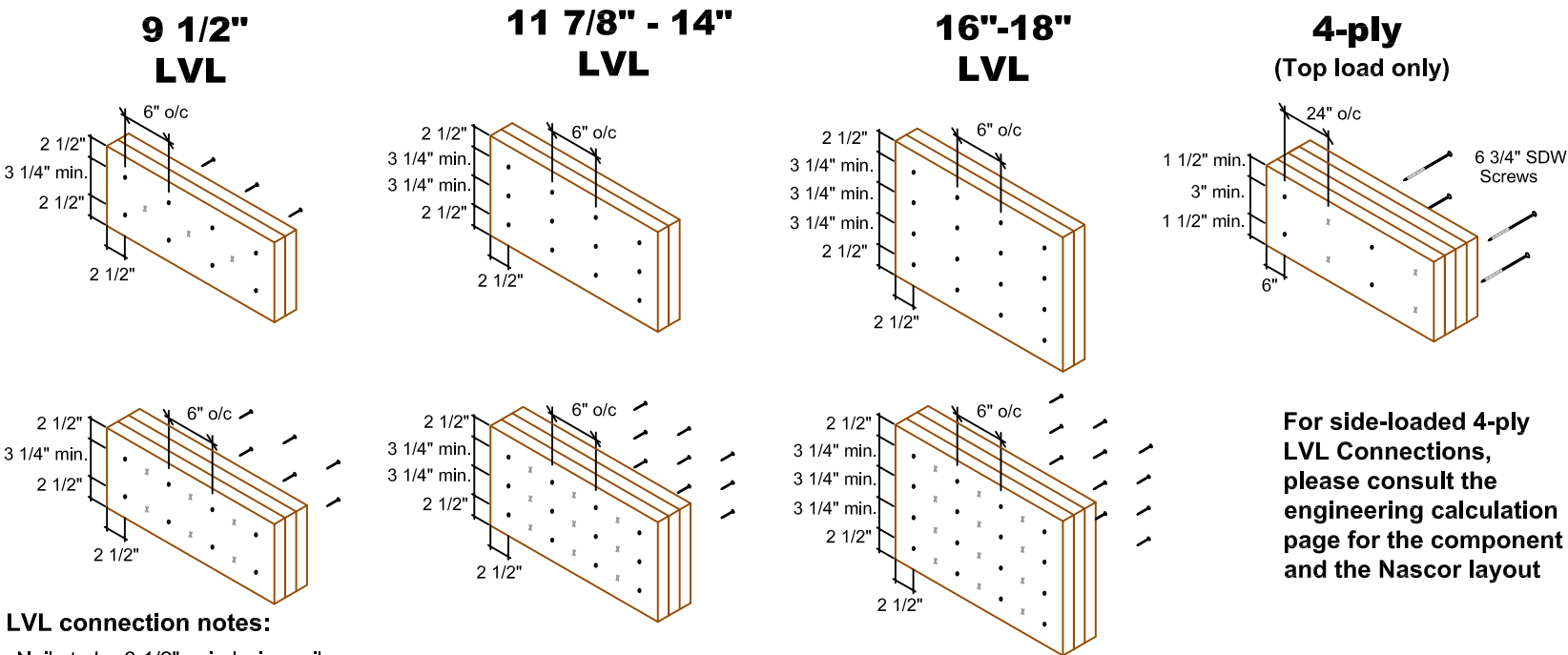
MULTIPLE MEMBER CONNECTIONS

Conventional Connections (for uniform distributed loads)



- 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.

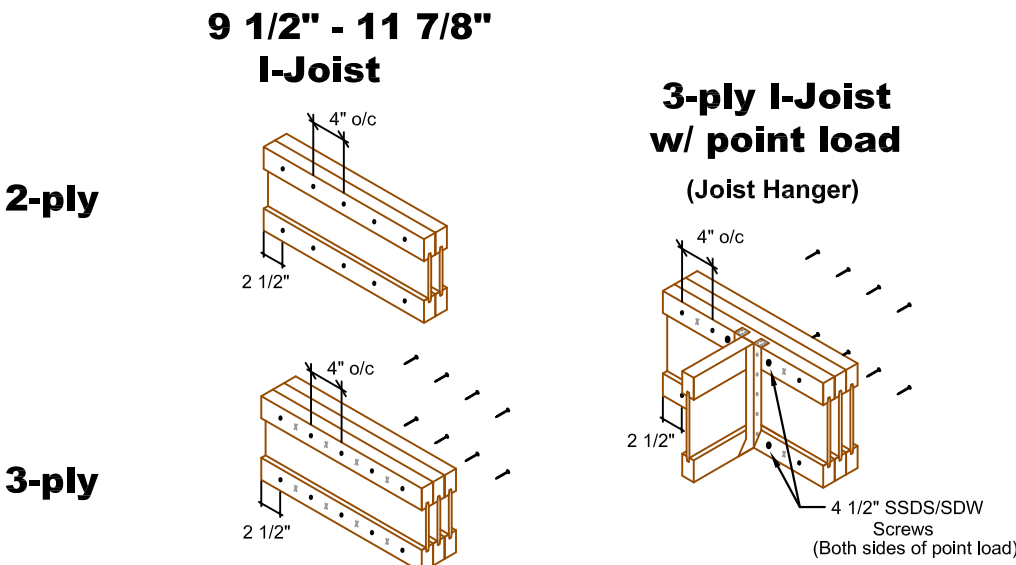
LVL Connections (for uniform distributed loads)



- LVL connection notes:**
- 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.

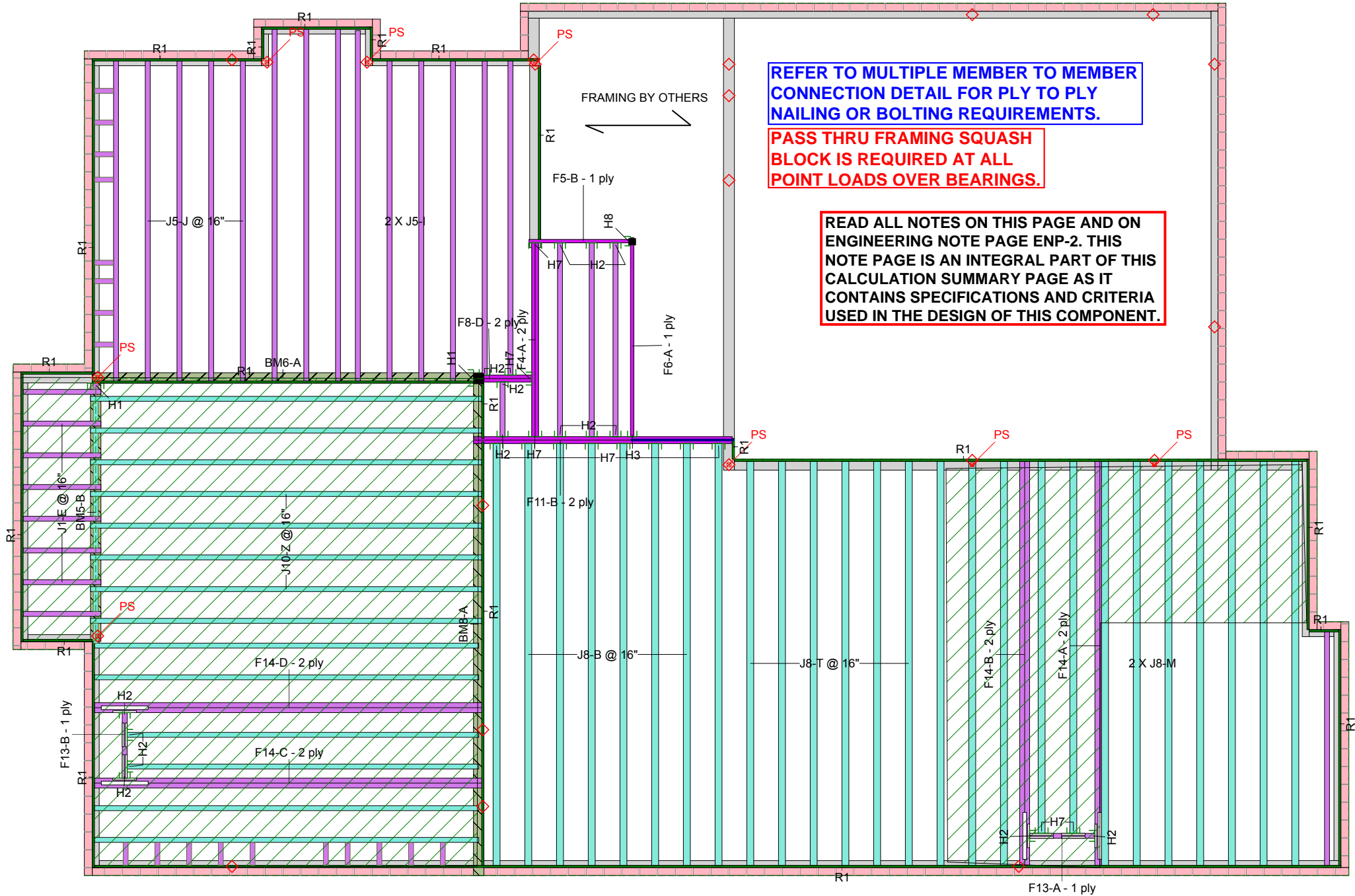
For side-loaded 4-ply LVL Connections, please consult the engineering calculation page for the component and the Nascor layout

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.

Ground Floor



Architectural Drawing Info

JARDIN DESIGN GROUP
64 JARDIN DR, SUITE 3A
VAUGHAN, ON L4K 3P3
Project # 17-55
Model: CELESTIAL 1
Date: MAY 22, 2018

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

EWP Studio
Simpson Strong-Tie®
Component Solutions™



JOISTS SPACING 16"O/C
UNLESS
NOTED OTHERWISE

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.

| Ground Floor LVL/LSL | | | | | | | |
|----------------------|-----------------------|-------|--------|-----|-------|-----|--------|
| Label | Description | Width | Depth | Qty | Plies | Pcs | Length |
| F11 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | 1 | 2 | 2 | 12-0-0 |
| F4 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | 1 | 2 | 2 | 10-0-0 |
| F6 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | | | 1 | 10-0-0 |
| F5 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | | | 1 | 6-0-0 |
| F8 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | 1 | 2 | 2 | 4-0-0 |

| I Joist | | | | | | | |
|---------|-------------|-------|--------|-----|-------|-----|--------|
| Label | Description | Width | Depth | Qty | Plies | Pcs | Length |
| J10 | NJ60H | 2.5 | 11.875 | | | 12 | 18-0-0 |
| J6 | NJ60H | 2.5 | 11.875 | | | 2 | 16-0-0 |
| J8 | NJ60U | 3.5 | 11.875 | | | 24 | 18-0-0 |
| J9 | NJ60U | 3.5 | 11.875 | | | 2 | 16-0-0 |
| F14 | NJH | 2.5 | 11.875 | 4 | 2 | 8 | 18-0-0 |
| F13 | NJH | 2.5 | 11.875 | | | 2 | 4-0-0 |
| J7 | NJH | 2.5 | 11.875 | | | 4 | 16-0-0 |
| J5 | NJH | 2.5 | 11.875 | | | 10 | 14-0-0 |
| J3 | NJH | 2.5 | 11.875 | | | 4 | 10-0-0 |
| J1 | NJH | 2.5 | 11.875 | | | 9 | 4-0-0 |

| Rim Board | | | | | | | |
|-----------|--------------------------------------|-------|--------|-----|-------|-----|--------|
| Label | Description | Width | Depth | Qty | Plies | Pcs | Length |
| R1 | Norbord Rimboard Plus 1.125 X 11.875 | 1.125 | 11.875 | | | 17 | 12 |

| Blocking | | | | | | | |
|----------|-------------|-------|--------|-------|-------|--------|--------|
| Label | Description | Width | Depth | Qty | Plies | Pcs | Length |
| BLK1 | NJ60H | 2.5 | 11.875 | LinFt | | Varies | 7-0-0 |
| BLK1 | NJH | 2.5 | 11.875 | LinFt | | Varies | 17-0-0 |

| Hanger | | | | | | | |
|--------|-----|-----------------|------|-------------|-----------|------------------|--|
| | | | | Beam/Girder | | Supported Member | |
| Label | Pcs | Description | Skew | Slope | fasteners | fasteners | |
| H1 | 2 | Unknown Hanger | | | | | |
| H2 | 16 | LF2511 | | | 12 10d | 1 #8x1 1/4WS | |
| H3 | 1 | HUS1.81/10 | | | 30 16d | 10 16d | |
| H7 | 13 | LF3511 | | | 12 10d | 2 #8x1 1/4WS | |
| NOTES | 1 | HUCQ1.81/10-SDS | | | | | |

- Framer to verify dimensions on the architectural drawings.
- 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 requirements.

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 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.

| Legend | |
|--------------------------------------|--------------------------------------|
| PS | Point Load Support |
| ◇ | Load from Above |
| Wall | Wall |
| Norbord Rimboard Plus 1.125 X 11.875 | Norbord Rimboard Plus 1.125 X 11.875 |
| NJ60H 11.875 | NJ60H 11.875 |
| NJ60U 11.875 | NJ60U 11.875 |
| NJH 11.875 | NJH 11.875 |
| Forex 2.0E-3000Fb LVL 1.75 X 11.875 | Forex 2.0E-3000Fb LVL 1.75 X 11.875 |
| 5.25 X 10.25 (Dropped) | 5.25 X 10.25 (Dropped) |



| | | |
|-------------------|--|---|
| Layout Name | | CELESTIAL 1 EL-1 & 2 |
| Design Method | | LSD |
| Description | | GREEN YORK HOMES GRANELLI HOMES PROJECT BRAMPTON, ON |
| Created | | May 31, 2018 |
| Builder | | |
| Sales Rep | | |
| Designer | | S B |
| Shipping | | |
| Project | | |
| Builder's Project | | Kott Lumber Company 14 Anderson Blvd Stouffville, Ontario Canada L4A 7X4 905-642-4400 |

| | | |
|---------------------|--|----------------------|
| Ground Floor | | |
| Design Method | | LSD |
| Building Code | | NBCC 2010 / OBC 2012 |
| Floor | | |
| Loads | | |
| Live | | 40 |
| Dead | | 15 |
| Deflection Joist | | |
| LL Span L/ | | 480 |
| TL Span L/ | | 360 |
| 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" |
| Fastener | | Nailed & Glued |
| Vibration | | |





EWP Studio
Simpson Strong-Tie®
Component Solutions™

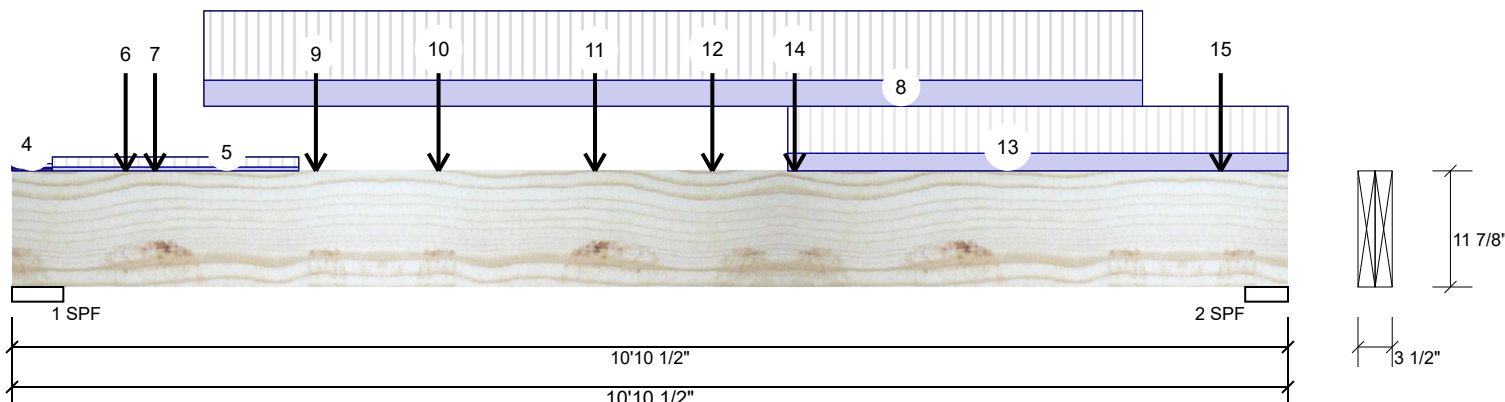
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 2

F11-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 2997 | 1419 | 0 | 0 |
| 2 | 3283 | 1366 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---------|--------|------|--------------|-------|----------|------------|
| 1 - SPF | 5.250" | 55% | 1774 / 4495 | 6270 | L | 1.25D+1.5L |
| 2 - SPF | 4.375" | 70% | 1707 / 4925 | 6632 | L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|------------|---------------|-------------|------------|---------|
| Moment | 16043 ft-lb | 5'4 13/16" | 34261 ft-lb | 0.468 (47%) | 1.25D+1.5L | L |
| Unbraced | 16043 ft-lb | 5'4 13/16" | 29422 ft-lb | 0.545 (55%) | 1.25D+1.5L | L |
| Shear | 6167 lb | 1'4 3/8" | 11596 lb | 0.532 (53%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.077 (L/1592) | 5'4 11/16" | 0.340 (L/360) | 0.230 (23%) | D | Uniform |
| LL Defl inch | 0.173 (L/707) | 5'5 5/8" | 0.340 (L/360) | 0.510 (51%) | L | L |
| TL Defl inch | 0.250 (L/489) | 5'5 5/16" | 0.510 (L/240) | 0.490 (49%) | D+L | L |

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- 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 | Tie-In | 0-0-0 to 0-4-2 | (Span)0-4-13 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-0-0 to 0-4-2 | (Span)0-11-3 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Part. Uniform | 0-0-0 to 0-2-9 | | Top | 1 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 4 | Part. Uniform | 0-0-0 to 0-2-8 | | Top | 2 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 5 | Tie-In | 0-4-2 to 2-5-5 | (Span)2-7-1 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 6 | Point | 0-11-10 | | Near Face | 135 lb | 360 lb | 0 lb | 0 lb | J8 |

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. 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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

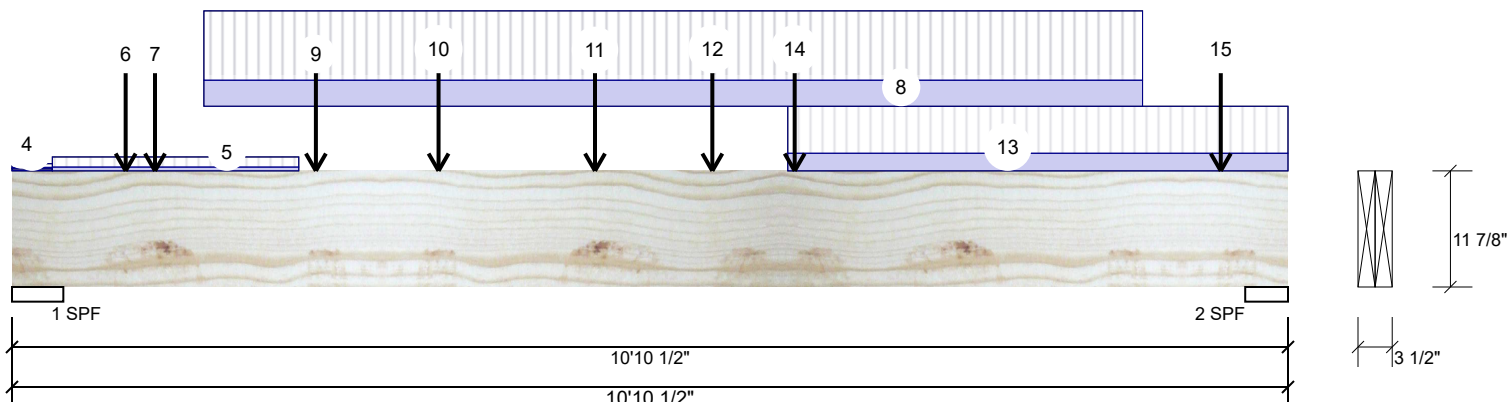
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 2 of 2

F11-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|------------------|------------|-----------|---------|---------|-------|-------|----------|
| 7 | Point | 1-2-10 | | Far Face | 19 lb | 50 lb | 0 lb | 0 lb | J1 |
| 8 | Part. Uniform | 1-7-10 to 9-7-10 | | Near Face | 133 PLF | 354 PLF | 0 PLF | 0 PLF | |
| 9 | Point | 2-7-1 | | Far Face | 564 lb | 718 lb | 0 lb | 0 lb | F4 |
| 10 | Point | 3-7-10 | | Far Face | 73 lb | 194 lb | 0 lb | 0 lb | J3 |
| 11 | Point | 4-11-10 | | Far Face | 71 lb | 190 lb | 0 lb | 0 lb | J3 |
| 12 | Point | 5-11-10 | | Far Face | 52 lb | 139 lb | 0 lb | 0 lb | J3 |
| 13 | Part. Uniform | 6-7-5 to 10-10-8 | | Top | 90 PLF | 240 PLF | 0 PLF | 0 PLF | |
| 14 | Point | 6-8-1 | | Far Face | 103 lb | 198 lb | 0 lb | 0 lb | F6 |
| 15 | Point | 10-3-10 | | Near Face | 172 lb | 458 lb | 0 lb | 0 lb | J8 |
| | 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 Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

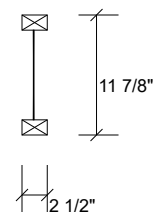
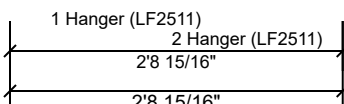
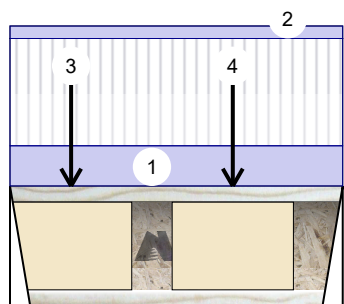
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 1

F13-A NJH 11.875" - PASSED

Level: Ground Floor



Member Information

| | | | |
|---------------------|--------|----------------|----------------------|
| Type: | Girder | Application: | Floor (Residential) |
| Plies: | 1 | 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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 421 | 209 | 0 | 0 |
| 2 | 344 | 171 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. React D/L lb | Total | Ld. Case | Ld. Comb. |
|------------|--------|-------------------|-----------|----------|------------|
| 1 - Hanger | 2.000" | 55% | 261 / 632 | 893 L | 1.25D+1.5L |
| 2 - Hanger | 2.000" | 45% | 213 / 515 | 729 L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|-------------------------|-----------|------------|---------------|-------------|------------|---------|
| Moment | 562 ft-lb | 1'10 1/16" | 5390 ft-lb | 0.104 (10%) | 1.25D+1.5L | L |
| Unbraced | 562 ft-lb | 1'10 1/16" | 4936 ft-lb | 0.114 (11%) | 1.25D+1.5L | L |
| Shear | 887 lb | 1 1/4" | 1810 lb | 0.490 (49%) | 1.25D+1.5L | L |
| Perm Defl in. (L/11493) | 0.003 | 1'10 1/16" | 0.085 (L/360) | 0.030 (3%) | D | Uniform |
| LL Defl inch (L/5711) | 0.005 | 1'10 1/16" | 0.085 (L/360) | 0.060 (6%) | L | L |
| TL Defl inch (L/3815) | 0.008 | 1'10 1/16" | 0.127 (L/240) | 0.060 (6%) | 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 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top flange unbraced.
- 4 Bottom flange braced at bearings.

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|-----------------|-------------|----------|--------|--------|-------|-------|----------|
| 1 | Tie-In | 0-0-0 to 2-8-15 | (Span)1-3-7 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Part. Uniform | 0-0-0 to 2-8-15 | | Top | 3 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 3 | Point | 0-6-1 | | Far Face | 157 lb | 316 lb | 0 lb | 0 lb | J9 |
| 4 | Point | 1-10-1 | | Far Face | 188 lb | 378 lb | 0 lb | 0 lb | J9 |

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

Nascor by Kott



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

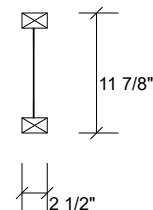
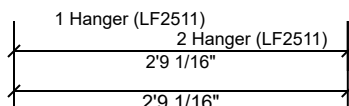
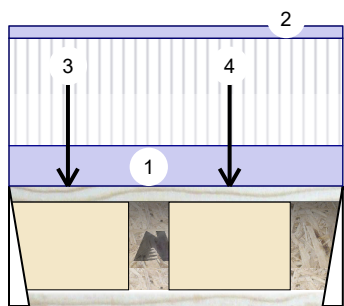
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 1

F13-B NJH 11.875" - PASSED

Level: Ground Floor



Member Information

| | | | |
|---------------------|--------|----------------|----------------------|
| Type: | Girder | Application: | Floor (Residential) |
| Plies: | 1 | 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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 409 | 203 | 0 | 0 |
| 2 | 327 | 162 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. React | D/L lb | Total | Ld. Case | Ld. Comb. |
|------------|--------|------------|-----------|-------|----------|------------|
| 1 - Hanger | 2.000" | 54% | 254 / 614 | 868 | L | 1.25D+1.5L |
| 2 - Hanger | 2.000" | 43% | 203 / 491 | 693 | L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|-------------------------|----------------|------------|---------------|-------------|------------|---------|
| Moment | 551 ft-lb | 1'9 13/16" | 5390 ft-lb | 0.102 (10%) | 1.25D+1.5L | L |
| Unbraced | 551 ft-lb | 1'9 13/16" | 4931 ft-lb | 0.112 (11%) | 1.25D+1.5L | L |
| Shear | 862 lb | 1 1/4" | 1810 lb | 0.476 (48%) | 1.25D+1.5L | L |
| Perm Defl in. (L/11772) | 0.003 | 1'9 13/16" | 0.085 (L/360) | 0.030 (3%) | D | Uniform |
| LL Defl inch | 0.005 (L/5836) | 1'9 13/16" | 0.085 (L/360) | 0.060 (6%) | L | L |
| TL Defl inch | 0.008 (L/3902) | 1'9 13/16" | 0.127 (L/240) | 0.060 (6%) | 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 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top flange unbraced.
- 4 Bottom flange braced at bearings.

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|----------------|--------------|-----------|--------|--------|-------|-------|----------|
| 1 | Tie-In | 0-0-0 to 2-9-1 | (Span)1-3-13 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Part. Uniform | 0-0-0 to 2-9-1 | | Top | 3 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 3 | Point | 0-5-13 | | Near Face | 149 lb | 299 lb | 0 lb | 0 lb | J6 |
| 4 | Point | 1-9-13 | | Near Face | 181 lb | 365 lb | 0 lb | 0 lb | J6 |

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

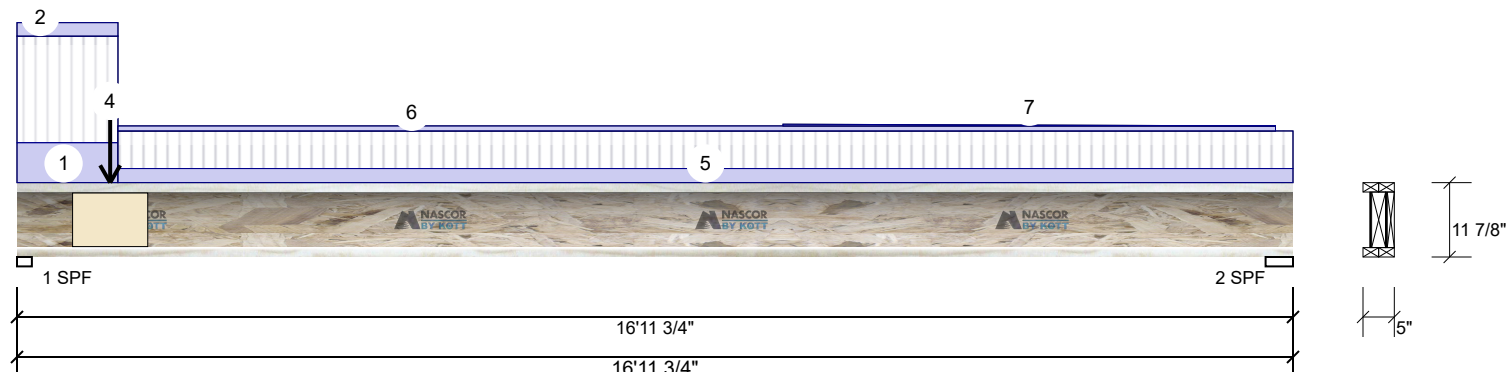
Nascor by Kott

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



F14-A NJH 11.875" 2-Ply - PASSED

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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 562 | 282 | 0 | 0 |
| 2 | 216 | 111 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. React D/L lb | Total | Ld. Case | Ld. Comb. |
|---------|--------|-------------------|-----------|----------|------------|
| 1 - SPF | 2.375" | 36% | 353 / 842 | 1195 L | 1.25D+1.5L |
| 2 - SPF | 4.375" | 13% | 139 / 324 | 463 L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|------------|---------------|--------------|------------|---------|
| Moment | 2101 ft-lb | 7'3 15/16" | 10780 ft-lb | 0.195 (19%) | 1.25D+1.5L | L |
| Unbraced | 2101 ft-lb | 7'3 15/16" | 2107 ft-lb | 0.997 (100%) | 1.25D+1.5L | L |
| Shear | 1177 lb | 1 5/8" | 3620 lb | 0.325 (33%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.046 (L/4345) | 8'1 1/8" | 0.551 (L/360) | 0.080 (8%) | D | Uniform |
| LL Defl inch | 0.089 (L/2232) | 8' 13/16" | 0.551 (L/360) | 0.160 (16%) | L | L |
| TL Defl inch | 0.135 (L/1475) | 8' 15/16" | 0.827 (L/240) | 0.160 (16%) | 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

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

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|-------------------|--------------|----------|--------|--------|-------|-------|----------|
| 1 | Tie-In | 0-0-0 to 1-4-2 | (Span)3-1-15 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Part. Uniform | 0-0-0 to 1-4-2 | | Top | 8 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 4 | Point | 1-2-14 | | Far Face | 171 lb | 344 lb | 0 lb | 0 lb | F13 |
| 5 | Tie-In | 1-4-2 to 16-11-12 | (Span)1-1-6 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 6 | Part. Uniform | 1-4-2 to 16-8-15 | | Top | 3 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 7 | Tapered Start | 10-2-5 | | Top | 1 PLF | 0 PLF | 0 PLF | 0 PLF | |
| | End | 16-9-0 | | | 0 PLF | 0 PLF | 0 PLF | 0 PLF | |

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

Nascor by Kott



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

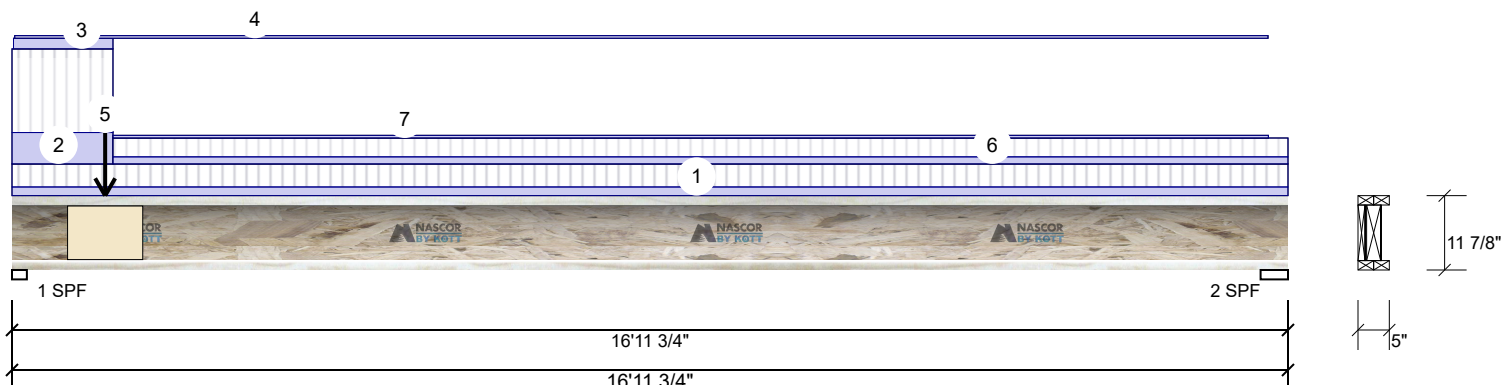
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 1

F14-B NJH 11.875" 2-Ply - PASSED

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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 723 | 360 | 0 | 0 |
| 2 | 302 | 150 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---------|--------|------|--------------|-------|----------|------------|
| 1 - SPF | 2.375" | 46% | 450 / 1084 | 1534 | L | 1.25D+1.5L |
| 2 - SPF | 4.375" | 18% | 188 / 453 | 640 | L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|-----------|---------------|--------------|------------|---------|
| Moment | 2865 ft-lb | 7'5 7/16" | 10780 ft-lb | 0.266 (27%) | 1.25D+1.5L | L |
| Unbraced | 2865 ft-lb | 7'5 7/16" | 2868 ft-lb | 0.999 (100%) | 1.25D+1.5L | L |
| Shear | 1511 lb | 1 5/8" | 3620 lb | 0.417 (42%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.061 (L/3252) | 8'1 1/4" | 0.551 (L/360) | 0.110 (11%) | D | Uniform |
| LL Defl inch | 0.122 (L/1627) | 8'1 1/4" | 0.551 (L/360) | 0.220 (22%) | L | L |
| TL Defl inch | 0.183 (L/1084) | 8'1 1/4" | 0.827 (L/240) | 0.220 (22%) | 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

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top flange must be laterally braced at a maximum of 7'10" o.c.
- Bottom flange braced at bearings.

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|-------------------|--------------|-----------|--------|--------|-------|-------|----------|
| 1 | Tie-In | 0-0-0 to 16-11-12 | (Span)0-10-7 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-0-0 to 1-4-2 | (Span)3-1-15 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Part. Uniform | 0-0-4 to 1-4-2 | | Top | 8 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 4 | Part. Uniform | 0-0-7 to 16-8-9 | | Top | 2 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 5 | Point | 1-2-14 | | Near Face | 209 lb | 421 lb | 0 lb | 0 lb | F13 |
| 6 | Tie-In | 1-4-2 to 16-11-12 | (Span)0-8-9 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 7 | Part. Uniform | 1-4-2 to 16-8-10 | | Top | 2 PLF | 0 PLF | 0 PLF | 0 PLF | |

Notes

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

Lumber

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

Handling & Installation

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

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

Manufacturer Info

Nascor by Kott

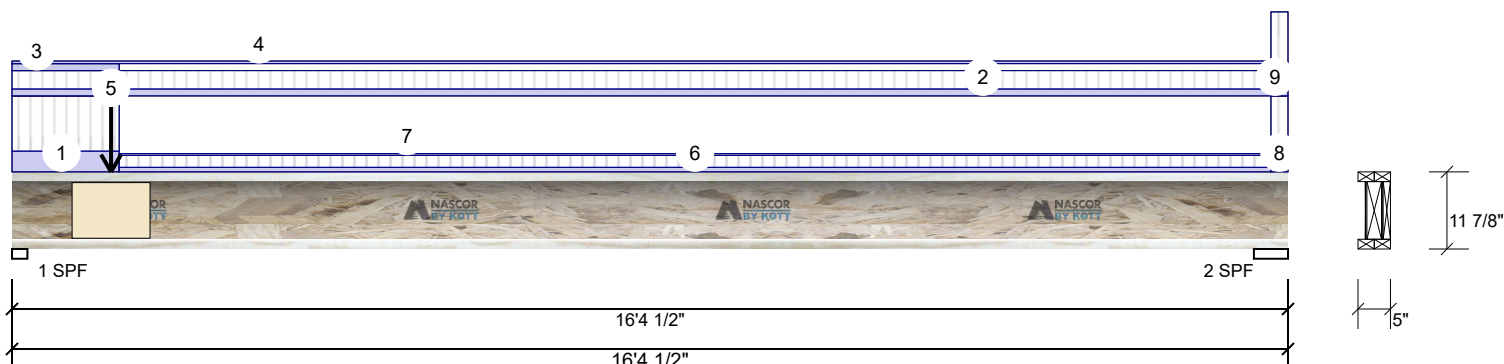


Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



F14-C NJH 11.875" 2-Ply - PASSED

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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 728 | 367 | 0 | 0 |
| 2 | 344 | 173 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. React | D/L lb | Total | Ld. Case | Ld. Comb. |
|---------|--------|------------|------------|-------|----------|------------|
| 1 - SPF | 2.375" | 47% | 459 / 1092 | 1551 | L | 1.25D+1.5L |
| 2 - SPF | 5.250" | 20% | 216 / 516 | 732 | L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|-----------|---------------|-------------|------------|---------|
| Moment | 2927 ft-lb | 7'2 1/16" | 10780 ft-lb | 0.272 (27%) | 1.25D+1.5L | L |
| Unbraced | 2927 ft-lb | 7'2 1/16" | 2945 ft-lb | 0.994 (99%) | 1.25D+1.5L | L |
| Shear | 1526 lb | 1 5/8" | 3620 lb | 0.422 (42%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.059 (L/3234) | 7'9 1/2" | 0.529 (L/360) | 0.110 (11%) | D | Uniform |
| LL Defl inch | 0.115 (L/1660) | 7'9 3/8" | 0.529 (L/360) | 0.220 (22%) | L | L |
| TL Defl inch | 0.174 (L/1097) | 7'9 7/16" | 0.793 (L/240) | 0.220 (22%) | 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

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top flange must be laterally braced at a maximum of 7'9" o.c.
- Bottom flange braced at bearings.

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|------------------|--------------|----------|--------|--------|-------|-------|----------|
| 1 | Tie-In | 0-0-0 to 1-4-8 | (Span)3-2-1 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-0-0 to 16-1-14 | (Span)1-0-11 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Part. Uniform | 0-0-0 to 1-4-8 | | Top | 8 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 4 | Part. Uniform | 0-0-0 to 16-1-3 | | Top | 3 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 5 | Point | 1-3-4 | | Far Face | 203 lb | 409 lb | 0 lb | 0 lb | F13 |
| 6 | Tie-In | 1-4-8 to 16-1-14 | (Span)0-8-5 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 7 | Part. Uniform | 1-4-8 to 16-1-3 | | Top | 2 PLF | 0 PLF | 0 PLF | 0 PLF | |

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

Nascor by Kott



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

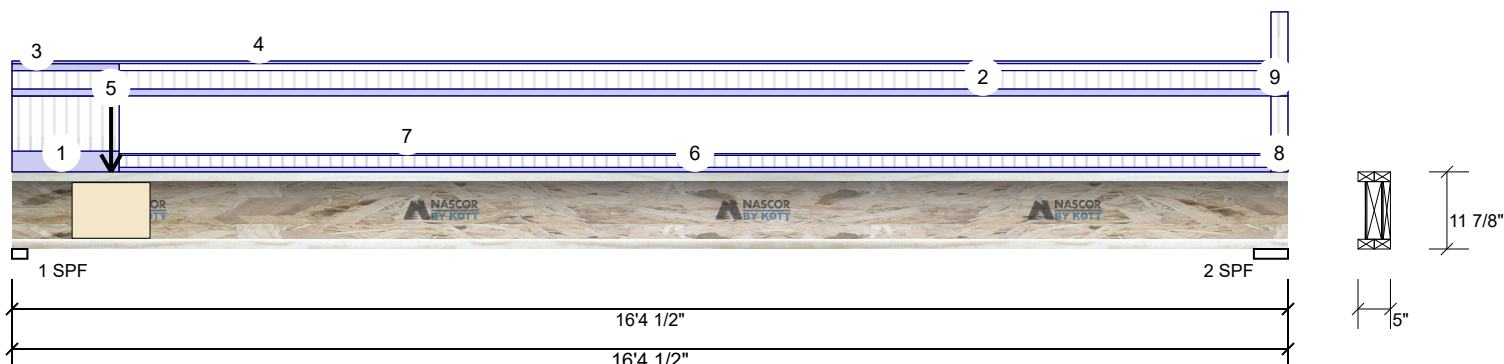
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 2 of 2

F14-C NJH 11.875" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|-----------|-------------------|-------------|------|--------|--------|-------|-------|----------|
| 8 | Tie-In | 16-1-14 to 16-4-8 | (Span)3-2-1 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 9 | Tie-In | 16-1-14 to 16-4-8 | (Span)3-6-1 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |

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

Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

Nascor by Kott



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

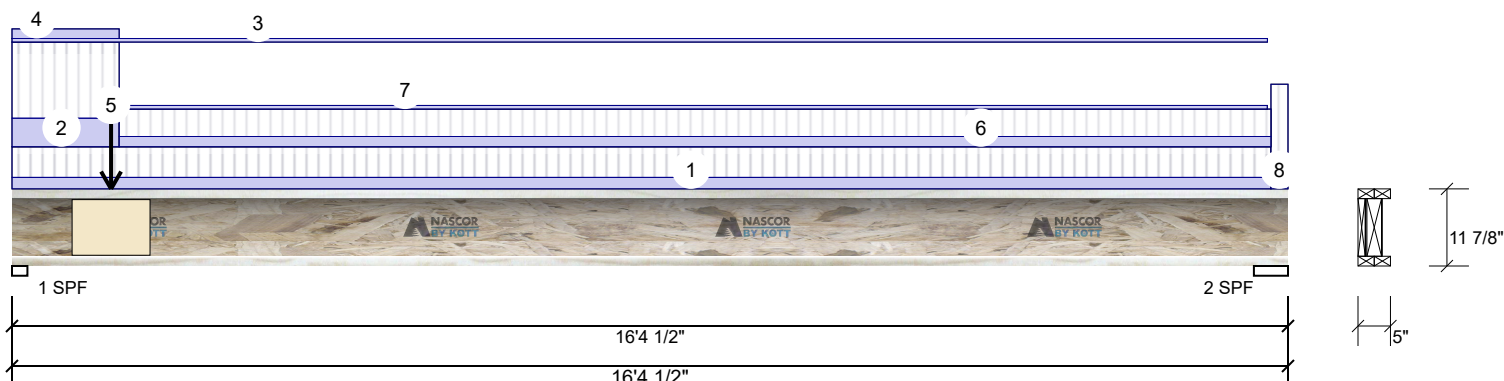
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 1

F14-D NJH 11.875" 2-Ply - PASSED

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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 747 | 372 | 0 | 0 |
| 2 | 430 | 213 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. React D/L lb | Total | Ld. Case | Ld. Comb. |
|---------|--------|-------------------|------------|----------|------------|
| 1 - SPF | 2.375" | 48% | 465 / 1121 | 1586 L | 1.25D+1.5L |
| 2 - SPF | 5.250" | 25% | 266 / 645 | 911 L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|-------------|---------------|-------------|------------|---------|
| Moment | 3670 ft-lb | 7'6 1/2" | 10780 ft-lb | 0.340 (34%) | 1.25D+1.5L | L |
| Unbraced | 3670 ft-lb | 7'6 1/2" | 3703 ft-lb | 0.991 (99%) | 1.25D+1.5L | L |
| Shear | 1560 lb | 1 5/8" | 3620 lb | 0.431 (43%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.072 (L/2647) | 7'10 11/16" | 0.529 (L/360) | 0.140 (14%) | D | Uniform |
| LL Defl inch | 0.144 (L/1320) | 7'10 5/8" | 0.529 (L/360) | 0.270 (27%) | L | L |
| TL Defl inch | 0.216 (L/881) | 7'10 11/16" | 0.793 (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

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top flange must be laterally braced at a maximum of 7' o.c.
- Bottom flange braced at bearings.

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|-------------------|--------------|-----------|--------|--------|-------|-------|----------|
| 1 | Tie-In | 0-0-0 to 16-1-14 | (Span)1-3-5 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-0-0 to 1-4-8 | (Span)3-2-1 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Part. Uniform | 0-0-0 to 16-1-5 | | Top | 3 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 4 | Part. Uniform | 0-0-0 to 1-4-8 | | Top | 8 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 5 | Point | 1-3-4 | | Near Face | 162 lb | 327 lb | 0 lb | 0 lb | F13 |
| 6 | Tie-In | 1-4-8 to 16-1-14 | (Span)1-1-11 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 7 | Part. Uniform | 1-4-8 to 16-1-5 | | Top | 3 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 8 | Tie-In | 16-1-14 to 16-4-8 | (Span)3-2-1 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |

Notes

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

Lumber

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

chemicals

Handling & Installation

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

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

Manufacturer Info

Nascor by Kott



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

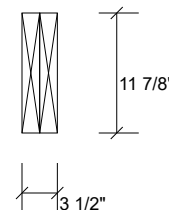
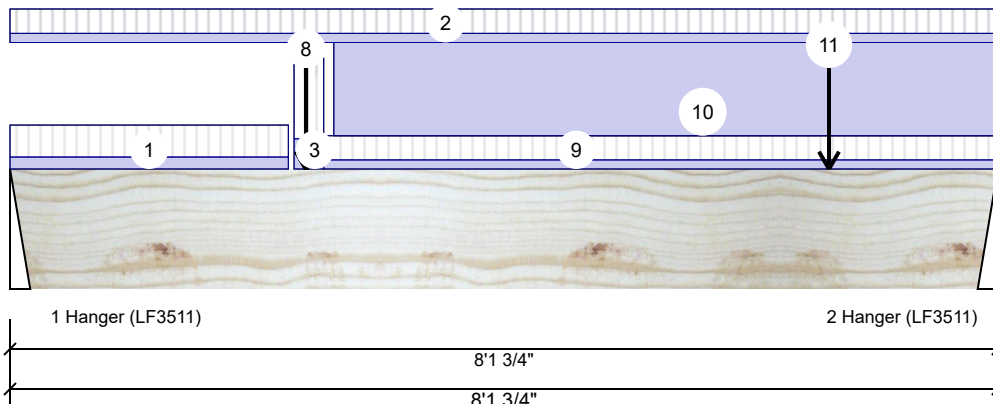
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 2

F4-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 718 | 564 | 0 | 0 |
| 2 | 682 | 642 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|------------|--------|------|--------------|-------|----------|------------|
| 1 - Hanger | 2.000" | 34% | 705 / 1076 | 1781 | L | 1.25D+1.5L |
| 2 - Hanger | 2.000" | 35% | 802 / 1023 | 1825 | L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|------------|---------------|-------------|------------|---------|
| Moment | 3845 ft-lb | 2'6 9/16" | 34261 ft-lb | 0.112 (11%) | 1.25D+1.5L | L |
| Unbraced | 3845 ft-lb | 2'6 9/16" | 31329 ft-lb | 0.123 (12%) | 1.25D+1.5L | L |
| Shear | 1664 lb | 1'1 1/8" | 11596 lb | 0.144 (14%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.019 (L/5107) | 3'11 7/16" | 0.265 (L/360) | 0.070 (7%) | D | Uniform |
| LL Defl inch | 0.021 (L/4600) | 3'9 7/16" | 0.265 (L/360) | 0.080 (8%) | L | L |
| TL Defl inch | 0.039 (L/2421) | 3'10 3/8" | 0.397 (L/240) | 0.100 (10%) | 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 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 | Tie-In | 0-0-0 to 2-3-9 | (Span)1-4-7 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-0-0 to 8-1-12 | (Span)1-0-9 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Tie-In | 2-4-2 to 2-7-1 | (Span)3-5-7 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 4 | Point | 2-5-5 | | Top | 85 lb | 226 lb | 0 lb | 0 lb | J5 |
| 5 | Point | 2-5-5 | | Top | 19 lb | 52 lb | 0 lb | 0 lb | J1 |
| 6 | Point | 2-5-5 | | Top | 77 lb | 0 lb | 0 lb | 0 lb | Wall Self Weight |

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

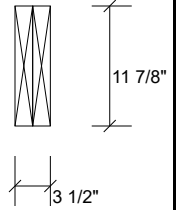
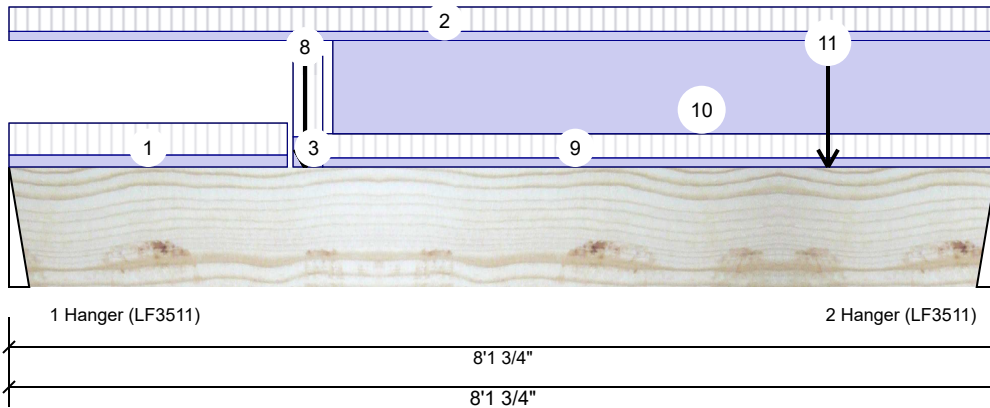
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 2 of 2

F4-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|-----------------|-------------|----------|--------|--------|-------|-------|------------------|
| 7 | Point | 2-5-5 | | Top | 30 lb | 0 lb | 0 lb | 0 lb | Wall Self Weight |
| 8 | Point | 2-5-5 | | Far Face | 191 lb | 383 lb | 0 lb | 0 lb | F8 |
| 9 | Tie-In | 2-7-1 to 8-1-12 | (Span)1-0-7 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 10 | Part. Uniform | 2-8-1 to 8-1-12 | | Top | 80 PLF | 0 PLF | 0 PLF | 0 PLF | Wall Self Weight |
| 11 | Point | 6-9-1 | | Top | 151 lb | 373 lb | 0 lb | 0 lb | F5 F5 |
| | 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 Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

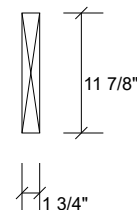
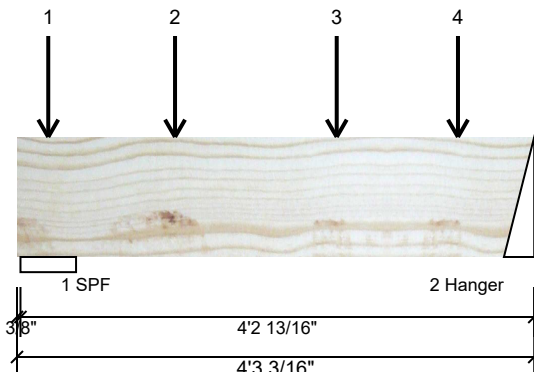
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 2

F5-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



Member Information

| | | | |
|---------------------|--------|----------------|----------------------|
| Type: | Girder | Application: | Floor (Residential) |
| Plies: | 1 | 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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 537 | 386 | 0 | 0 |
| 2 | 294 | 120 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. React D/L lb | Total | Ld. Case | Ld. Comb. |
|------------|--------|-------------------|-------|----------|------------|
| 1 - SPF | 5.500" | 22% 483 / 805 | 1288 | _L | 1.25D+1.5L |
| 2 - Hanger | 3.000" | 15% 150 / 442 | 592 | _L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|-------------------|-----------|----------------|-------------|------------|---------|
| Moment | 572 ft-lb | 2'7 5/8" | 17130 ft-lb | 0.033 (3%) | 1.25D+1.5L | _L |
| Unbraced | 572 ft-lb | 2'7 5/8" | 11703 ft-lb | 0.049 (5%) | 1.25D+1.5L | _L |
| Shear | 585 lb | 3'1 1/16" | 5798 lb | 0.101 (10%) | 1.25D+1.5L | _L |
| Perm Defl in. | 0.001 (L/37483) | 2'4 1/4" | 0.127 (L/360) | 0.010 (1%) | D | Uniform |
| LL Defl inch | 0.003 (L/15209) | 2'4 5/8" | 0.127 (L/360) | 0.020 (2%) | L | LL |
| TL Defl inch | 0.004 (L/10819) | 2'4 9/16" | 0.191 (L/240) | 0.020 (2%) | D+L | LL |
| LL Cant | -0.000 (2L/19381) | Lt Cant | 0.200 (2L/480) | 0.000 (0%) | L | LL |
| TL Cant | -0.000 (2L/13782) | Lt Cant | 0.300 (2L/360) | 0.000 (0%) | D+L | LL |

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 Top braced at bearings.
- 4 Bottom braced at bearings.

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|-----------|----------|------------|-----------|--------|--------|------|------|----------|
| 1 | Point | 0-3-2 | | Near Face | 290 lb | 308 lb | 0 lb | 0 lb | F4 |
| 2 | Point | 1-3-10 | | Near Face | 73 lb | 194 lb | 0 lb | 0 lb | J3 |
| 3 | Point | 2-7-10 | | Near Face | 71 lb | 190 lb | 0 lb | 0 lb | J3 |

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

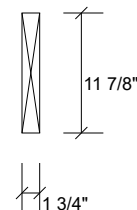
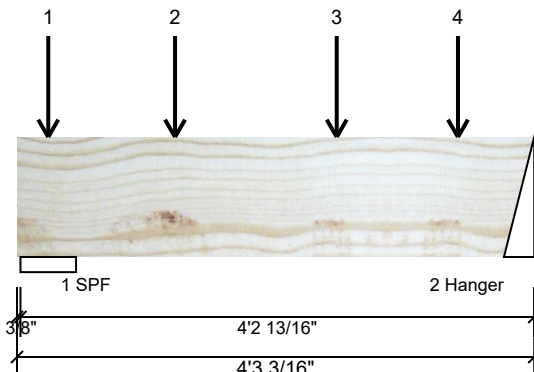
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 2 of 2

F5-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 |
|----|-------------|----------|------------|-----------|-------|--------|------|------|----------|
| 4 | Point | 3-7-10 | | Near Face | 52 lb | 139 lb | 0 lb | 0 lb | J3 |
| | 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 Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

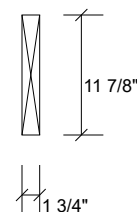
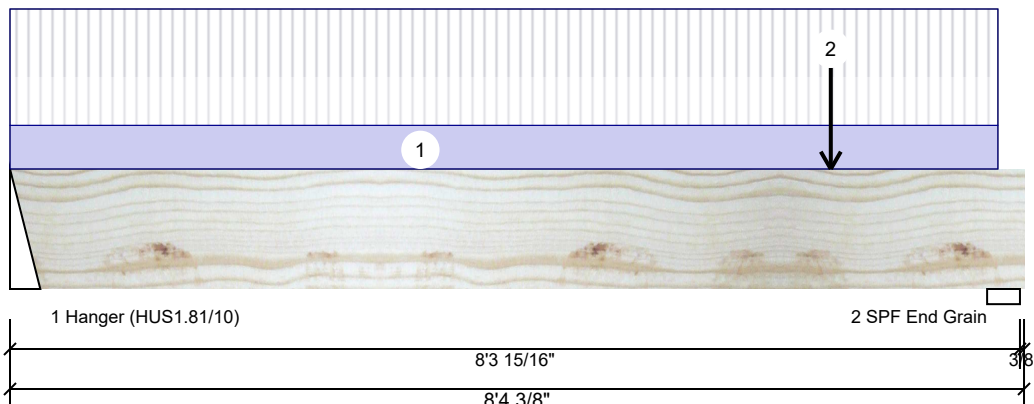


Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



F6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor

**Member Information**

| | | | |
|---------------------|--------|----------------|----------------------|
| Type: | Girder | Application: | Floor (Residential) |
| Plies: | 1 | 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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 198 | 103 | 0 | 0 |
| 2 | 697 | 320 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|-------------|--------|------|--------------|-------|----------|------------|
| 1 - Hanger | 3.000" | 11% | 128 / 296 | 425 | L_ | 1.25D+1.5L |
| 2 - SPF End | 3.250" | 34% | 400 / 1045 | 1445 | L_ | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|------------------|-------------|----------------|-------------|------------|---------|
| Moment | 2025 ft-lb | 6'9 1/4" | 17130 ft-lb | 0.118 (12%) | 1.25D+1.5L | L_ |
| Unbraced | 2025 ft-lb | 6'9 1/4" | 5617 ft-lb | 0.361 (36%) | 1.25D+1.5L | L_ |
| Shear | 1412 lb | 7'2 7/16" | 5798 lb | 0.244 (24%) | 1.25D+1.5L | L_ |
| Perm Defl in. | 0.011 (L/9116) | 4'10 3/16" | 0.267 (L/360) | 0.040 (4%) | D | Uniform |
| LL Defl inch | 0.022 (L/4336) | 4'11 1/8" | 0.267 (L/360) | 0.080 (8%) | L | LL |
| TL Defl inch | 0.033 (L/2939) | 4'10 13/16" | 0.400 (L/240) | 0.080 (8%) | D+L | LL |
| LL Cant | -0.000 (2L/2691) | Rt Cant | 0.200 (2L/480) | 0.001 (0%) | L | LL |
| TL Cant | -0.000 (2L/1832) | Rt Cant | 0.300 (2L/360) | 0.001 (0%) | D+L | LL |

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 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 8-1-12 | (Span)0-8-7 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Point | 6-9-4 | | Top | 340 lb | 780 lb | 0 lb | 0 lb | C5 |
| | Self Weight | | | | 5 PLF | | | | |

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

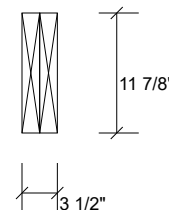
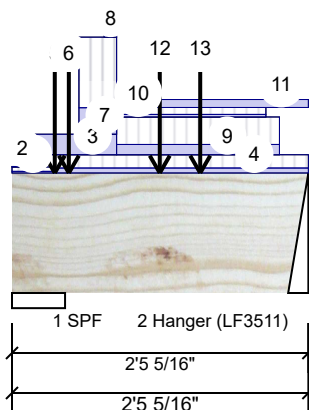
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 2

F8-D Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 2902 | 1305 | 0 | 0 |
| 2 | 383 | 191 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|------------|--------|------|--------------|-------|----------|------------|
| 1 - SPF | 5.250" | 54% | 1631 / 4353 | 5984 | L | 1.25D+1.5L |
| 2 - Hanger | 2.000" | 16% | 238 / 575 | 813 | L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|-----------------|------------|---------------|------------|------------|---------|
| Moment | 528 ft-lb | 1'6 5/8" | 34261 ft-lb | 0.015 (2%) | 1.25D+1.5L | L |
| Unbraced | 528 ft-lb | 1'6 5/8" | 34261 ft-lb | 0.015 (2%) | 1.25D+1.5L | L |
| Shear | 853 lb | 1'4 3/8" | 11596 lb | 0.074 (7%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.000 (L/58768) | 1'5 13/16" | 0.066 (L/360) | 0.010 (1%) | D | Uniform |
| LL Defl inch | 0.001 (L/27132) | 1'6 5/8" | 0.066 (L/360) | 0.010 (1%) | L | L |
| TL Defl inch | 0.001 (L/18576) | 1'6 3/8" | 0.098 (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 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Multiple plies must be fastened together as per manufacturer's details.
- 5 Top loads must be supported equally by all plies.
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- 8 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 0-4-2 | (Span)0-10-4 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Part. Uniform | 0-0-0 to 0-2-10 | | Top | 2 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 3 | Part. Uniform | 0-0-0 to 0-10-6 | | Top | 80 PLF | 0 PLF | 0 PLF | 0 PLF | Wall Self Weight |

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

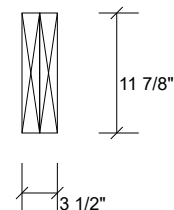
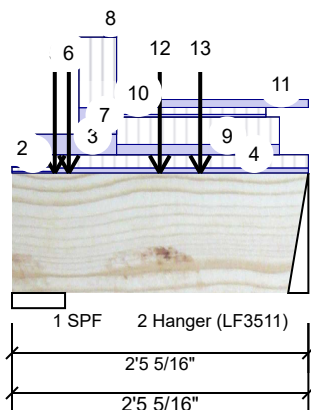
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 2 of 2

F8-D Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|------------------|-------------|-----------|---------|---------|-------|-------|------------------|
| 4 | Tie-In | 0-4-2 to 2-5-5 | (Span)2-7-1 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 5 | Point | 0-4-4 | | Top | 965 lb | 2248 lb | 0 lb | 0 lb | F12 F12 |
| 6 | Point | 0-5-10 | | Far Face | 119 lb | 318 lb | 0 lb | 0 lb | J5 |
| 7 | Part. Uniform | 0-6-10 to 0-10-6 | | Top | 103 PLF | 275 PLF | 0 PLF | 0 PLF | J5 |
| 8 | Part. Uniform | 0-9-2 to 0-10-6 | | Top | 26 PLF | 68 PLF | 0 PLF | 0 PLF | J1 |
| 9 | Part. Uniform | 0-10-6 to 2-2-7 | | Top | 40 PLF | 107 PLF | 0 PLF | 0 PLF | J5 |
| 10 | Part. Uniform | 0-10-6 to 2-1-2 | | Top | 10 PLF | 27 PLF | 0 PLF | 0 PLF | J1 |
| 11 | Part. Uniform | 0-10-6 to 2-5-5 | | Top | 31 PLF | 0 PLF | 0 PLF | 0 PLF | Wall Self Weight |
| 12 | Point | 1-2-10 | | Near Face | 19 lb | 50 lb | 0 lb | 0 lb | J1 |
| 13 | Point | 1-6-10 | | Far Face | 107 lb | 285 lb | 0 lb | 0 lb | J5 |
| | 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 Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

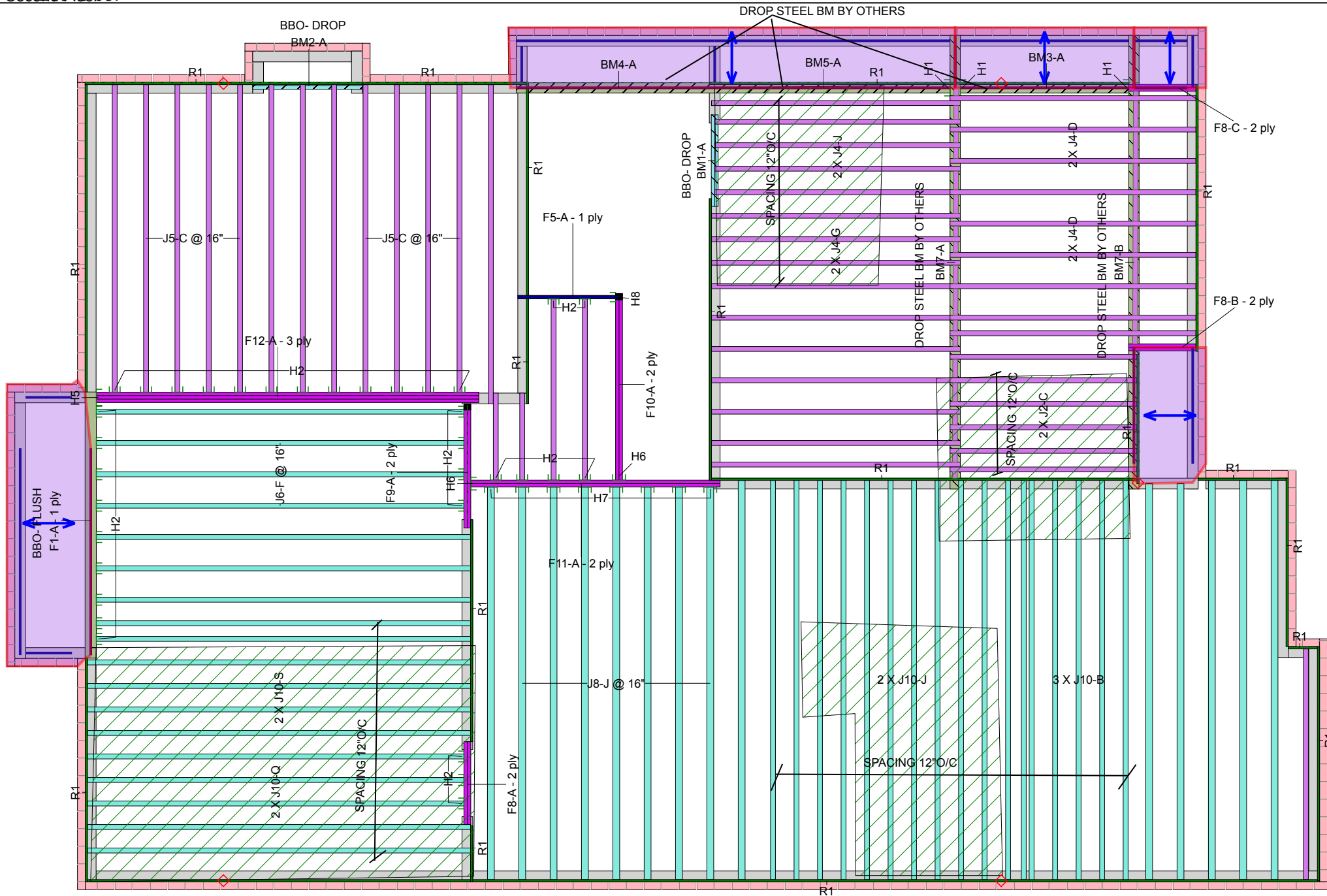
Manufacturer Info

Forex
APA: PR-L318



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





Architectural Drawing Info

JARDIN DESIGN GROUP
64 JARDIN DR, SUITE 3A
VAUGHAN, ON L4K 3P3
Project # 17-55
Model: CELESTIAL 1
Date: MAY 22, 2018

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)

JOISTS SPACING 16\"/>



EWP Studio
Simpson Strong-Tie®
Component Solutions™

EWP Studio Version 18.32.085 Powered by iStruct™

Legend

| | |
|--------------------------------------|--------------------------------------|
| PS | Point Load Support |
| ◆ | Load from Above |
| Wall | Wall |
| Norbord Rimboard Plus 1.125 X 11.875 | Norbord Rimboard Plus 1.125 X 11.875 |
| NJ60H 11.875 | NJ60H 11.875 |
| NJ60U 11.875 | NJ60U 11.875 |
| NJH 11.875 | NJH 11.875 |
| Forex 2.0E-3000Fb LVL 1.75 X 11.875 | Forex 2.0E-3000Fb LVL 1.75 X 11.875 |
| 1.75 X 9.5 (Dropped) | 1.75 X 9.5 (Dropped) |
| 5.25 X 10.25 (Dropped) | 5.25 X 10.25 (Dropped) |
| 5.75 X 10.25 | 5.75 X 10.25 |

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.



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.

| Second Floor LVL/LSL | | | | | | | |
|---|--------------------------------------|-----------------|--------|-------------|-----------|------------------|--------|
| Label | Description | Width | Depth | Qty | Plies | Pcs | Length |
| F12 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | 1 | 3 | 3 | 18-0-0 |
| F11 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | 1 | 2 | 2 | 12-0-0 |
| F10 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | 1 | 2 | 2 | 8-0-0 |
| F9 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | 1 | 2 | 2 | 6-0-0 |
| F5 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | | | 1 | 6-0-0 |
| F8 | Forex 2.0E-3000Fb LVL | 1.75 | 11.875 | 3 | 2 | 6 | 4-0-0 |
| I Joist | | | | | | | |
| Label | Description | Width | Depth | Qty | Plies | Pcs | Length |
| J10 | NJ60H | 2.5 | 11.875 | | | 26 | 18-0-0 |
| J6 | NJ60H | 2.5 | 11.875 | | | 9 | 16-0-0 |
| J8 | NJ60U | 3.5 | 11.875 | | | 14 | 18-0-0 |
| J5 | NJH | 2.5 | 11.875 | | | 13 | 14-0-0 |
| J4 | NJH | 2.5 | 11.875 | | | 24 | 12-0-0 |
| J3 | NJH | 2.5 | 11.875 | | | 1 | 10-0-0 |
| J2 | NJH | 2.5 | 11.875 | | | 8 | 8-0-0 |
| J1 | NJH | 2.5 | 11.875 | | | 2 | 4-0-0 |
| Rim Board | | | | | | | |
| Label | Description | Width | Depth | Qty | Plies | Pcs | Length |
| R1 | Norbord Rimboard Plus 1.125 X 11.875 | 1.125 | 11.875 | | | 18 | 12 |
| Blocking | | | | | | | |
| Label | Description | Width | Depth | Qty | Plies | Pcs | Length |
| BLK1 | NJH | 2.5 | 11.875 | LinFt | | Varies | 20-0-0 |
| Hanger | | | | | | | |
| | | | | Beam/Girder | | Supported Member | |
| Label | Pcs | Description | Skew | Slope | fasteners | fasteners | |
| H1 | 3 | Unknown Hanger | | | | | |
| H2 | 34 | LF2511 | | | 12 10d | 1 #8x1 1/4WS | |
| H5 | 1 | HUC610 (Max) | | | 18 16d | 8 16d | |
| H6 | 2 | HGUS410 | | | 46 16d | 16 16d | |
| H7 | 8 | LF3511 | | | 12 10d | 2 #8x1 1/4WS | |
| H8 | 1 | HUCQ1.81/10-SDS | | | | | |
| NOTES: | | | | | | | |
| <div>1. Framers to verify dimensions on the architectural drawings.</div> <div>2. Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.</div> <div>3. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls.</div> <div>4. Install single-ply flush window header along inside face of rimboard/rimjoist</div> <div>5. Refer to Nascor specifier guide for installation details.</div> <div>6. 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.</div> <div>7. Load transfer blocks to be installed under all point loads.</div> <div>8. It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.</div> <div>Refer to Multiple Member Connection Detail to ply to ply nailing or bolting requirements.</div> <div>Rim parallel to joists: 1-1/8" rimboard with 2"x4" block (1/16" longer than rim depth) @ 16" o/c.</div> <div>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.</div> <div>Hatch area represents ceramic tiled floor with an additional dead load of 5 PSF.</div> <div>The framing shown on this layout may be deviate from the architectural drawings. Project Engineer to review and approve the deviation prior to construction.</div> | | | | | | | |



Layout Name
CELESTIAL 1 EL-1 & 2_4BEDRM

Design Method
LSD

Description
GREEN YORK HOMES
GRANELLI HOMES PROJECT
BRAMPTON, ON

Created
May 31, 2018

Builder

Sales Rep

Designer
S B

Shipping

Project

Builder's Project

Kott Lumber Company

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

Second Floor

Design Method LSD
Building Code NBCC 2010 / OBC 2012

Floor

Loads

Live 40

Dead 15

Deflection Joist

LL Span L/ 480

TL Span L/ 360

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 5/8"

Fastener Nailed & Glued

Vibration

Ceiling: Gypsum 1/2"

Roof

Loads

Live 0

Dead 17

Snow 36

Deflection Joist

LL Span L/ 360

TL Span L/ 240

LL Cant 2L/ 360

TL Cant 2L/ 360

Deflection Girder

LL Span L/ 360

TL Span L/ 240

LL Cant 2L/ 360

TL Cant 2L/ 360

Decking

Deck SPF Plywood

Thickness 5/8"

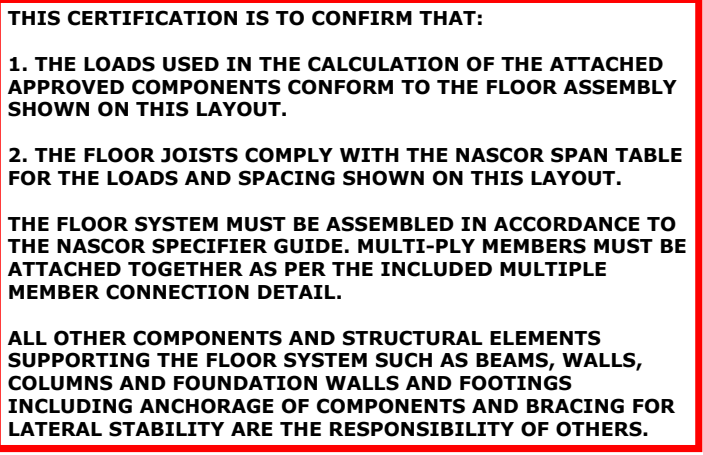
Fastener Nailed Only



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



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



LICENSED PROFESSIONAL ENGINEER
 N.A. EL-MASRI
 PROVINCE OF ONTARIO
 Jun 05, 2018
 NE0618-037

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

EWP Studio Version 18.32.085 Powered by iStruct™

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 only. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them.



SIMPSON

Strong-Tie



EWP Studio
Simpson Strong-Tie®
Component Solutions™

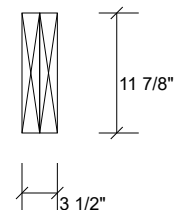
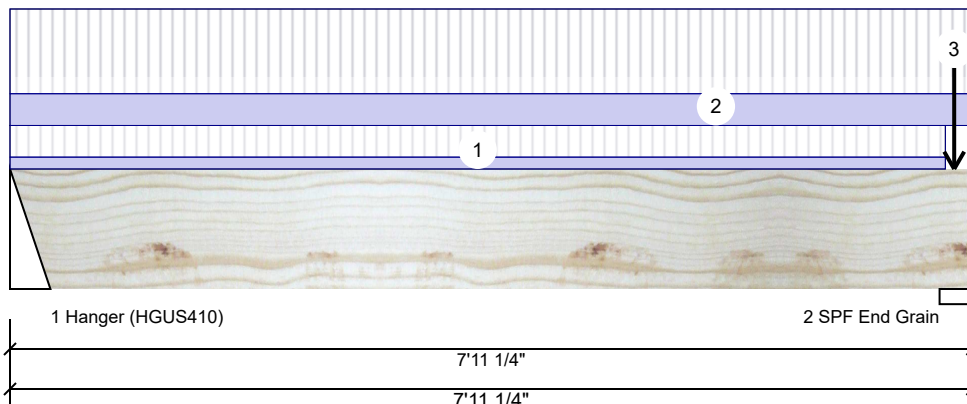
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 1

F10-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second 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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 427 | 198 | 0 | 0 |
| 2 | 780 | 340 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|-------------------|--------|------|--------------|-------|----------|------------|
| 1 - Hanger | 4.000" | 9% | 248 / 641 | 888 | L | 1.25D+1.5L |
| 2 - SPF End Grain | 3.250" | 19% | 425 / 1170 | 1594 | L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|-------------------------|----------------|----------|---------------|------------|------------|---------|
| Moment | 1544 ft-lb | 4' | 34261 ft-lb | 0.045 (5%) | 1.25D+1.5L | L |
| Unbraced | 1544 ft-lb | 4' | 31673 ft-lb | 0.049 (5%) | 1.25D+1.5L | L |
| Shear | 608 lb | 6'8 7/8" | 11596 lb | 0.052 (5%) | 1.25D+1.5L | L |
| Perm Defl in. (L/19948) | 0.004 | 4' | 0.249 (L/360) | 0.020 (2%) | D | Uniform |
| LL Defl inch | 0.010 (L/9260) | 4' | 0.249 (L/360) | 0.040 (4%) | L | L |
| TL Defl inch | 0.014 (L/6324) | 4' | 0.373 (L/240) | 0.040 (4%) | 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 braced at bearings.
- 6 Bottom braced at bearings.
- 7 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 | Tie-In | 0-0-0 to 7-8-9 | (Span)1-5-7 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-0-0 to 7-11-4 | (Span)3-10-10 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Point | 7-9-7 | | Far Face | 147 lb | 366 lb | 0 lb | 0 lb | F5 |
| | Self Weight | | | | 10 PLF | | | | |

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

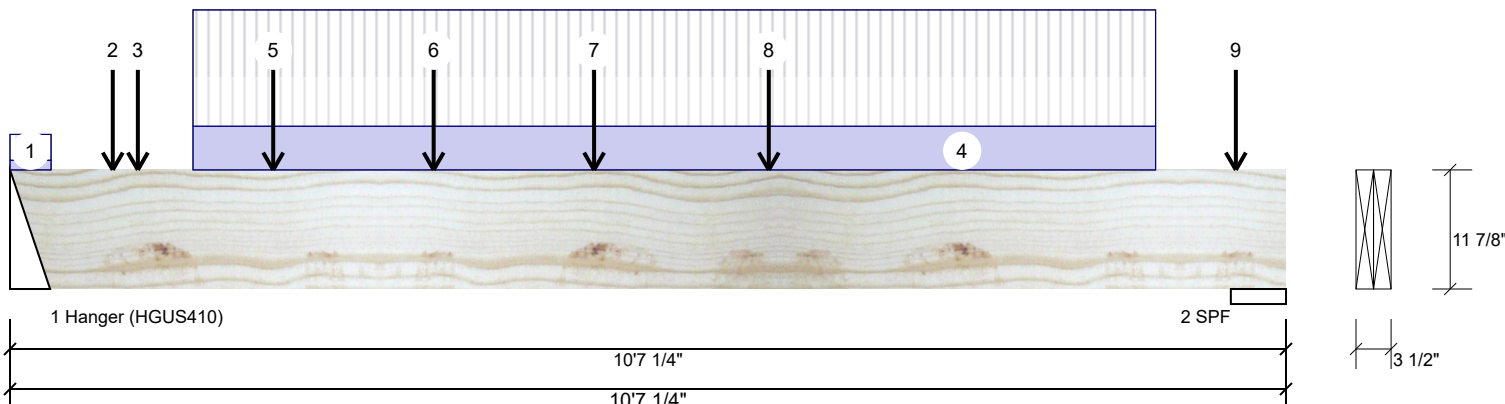
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 2

F11-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second 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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 2178 | 883 | 0 | 0 |
| 2 | 2156 | 884 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. React | D/L lb | Total | Ld. Case | Ld. Comb. |
|------------|--------|------------|-------------|-------|----------|------------|
| 1 - Hanger | 4.000" | 42% | 1103 / 3267 | 4370 | L | 1.25D+1.5L |
| 2 - SPF | 5.500" | 37% | 1105 / 3234 | 4339 | L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|------------|---------------|-------------|------------|---------|
| Moment | 11617 ft-lb | 5'2 3/8" | 34261 ft-lb | 0.339 (34%) | 1.25D+1.5L | L |
| Unbraced | 11617 ft-lb | 5'2 3/8" | 29666 ft-lb | 0.392 (39%) | 1.25D+1.5L | L |
| Shear | 4502 lb | 1'3 1/8" | 11596 lb | 0.388 (39%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.049 (L/2443) | 5'2 15/16" | 0.331 (L/360) | 0.150 (15%) | D | Uniform |
| LL Defl inch | 0.119 (L/998) | 5'2 11/16" | 0.331 (L/360) | 0.360 (36%) | L | L |
| TL Defl inch | 0.168 (L/709) | 5'2 13/16" | 0.497 (L/240) | 0.340 (34%) | 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 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 | Tie-In | 0-0-0 to 0-4-2 | (Span)3-8-0 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Point | 0-10-4 | | Near Face | 139 lb | 370 lb | 0 lb | 0 lb | J8 |
| 3 | Point | 1-0-12 | | Far Face | 30 lb | 80 lb | 0 lb | 0 lb | J1 |
| 4 | Part. Uniform | 1-6-4 to 9-6-4 | | Near Face | 124 PLF | 330 PLF | 0 PLF | 0 PLF | |
| 5 | Point | 2-2-4 | | Far Face | 31 lb | 84 lb | 0 lb | 0 lb | J1 |
| 6 | Point | 3-6-4 | | Far Face | 75 lb | 200 lb | 0 lb | 0 lb | J2 |

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

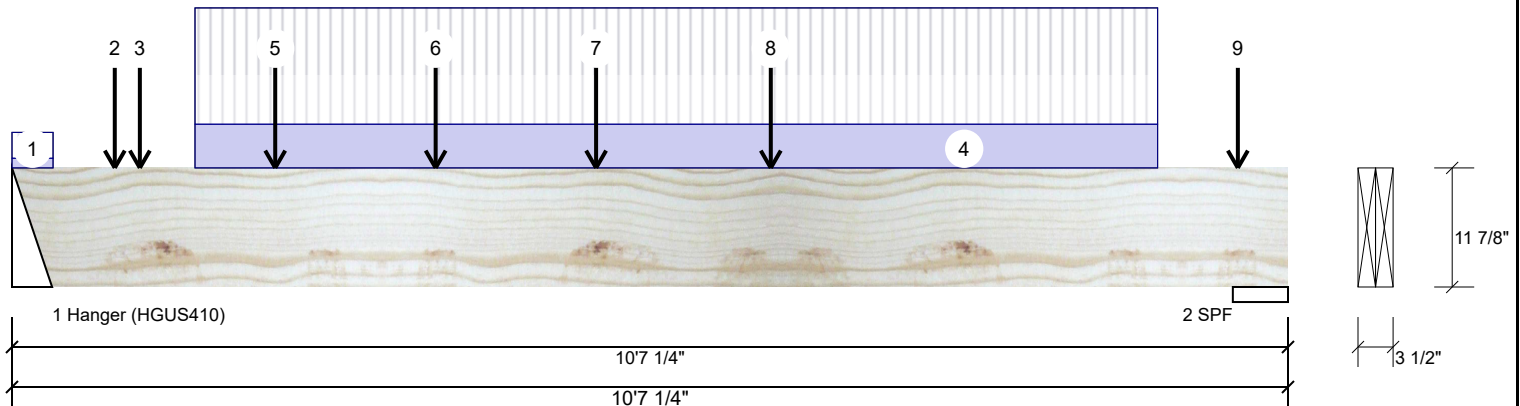
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 2 of 2

F11-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



...Continued from page 1

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|-------------|----------|------------|-----------|--------|--------|------|------|----------|
| 7 | Point | 4-10-4 | | Far Face | 81 lb | 215 lb | 0 lb | 0 lb | J2 |
| 8 | Point | 6-3-11 | | Far Face | 198 lb | 427 lb | 0 lb | 0 lb | F10 |
| 9 | Point | 10-2-4 | | Near Face | 110 lb | 293 lb | 0 lb | 0 lb | J8 |
| | 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 ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

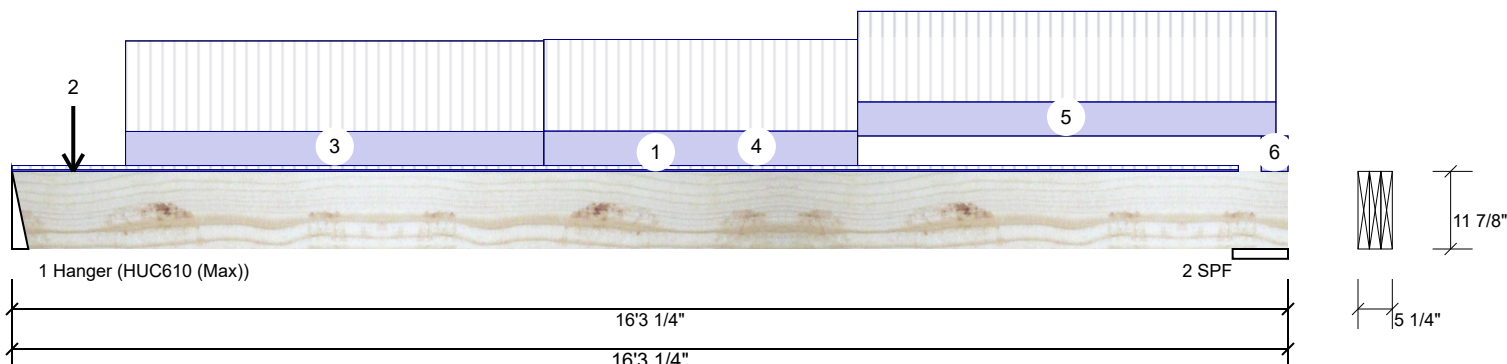
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 1

F12-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED

Level: Second Floor



Member Information

| | | | |
|---------------------|--------|----------------|----------------------|
| Type: | Girder | Application: | Floor (Residential) |
| Plies: | 3 | Design Method: | LSD |
| Moisture Condition: | Dry | Building Code: | NBCC 2010 / OBC 2012 |
| Deflection LL: | 360 | Load Sharing: | Yes |
| Deflection TL: | 240 | Deck: | Not Checked |
| Importance: | Normal | Vibration: | Not Checked |
| General Load | | | |
| Floor Live: | 40 PSF | | |
| Dead: | 15 PSF | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 2091 | 898 | 0 | 0 |
| 2 | 2248 | 965 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. React | D/L lb | Total | Ld. Case | Ld. Comb. |
|------------|--------|------------|-------------|-------|----------|------------|
| 1 - Hanger | 2.500" | 44% | 1123 / 3136 | 4259 | L | 1.25D+1.5L |
| 2 - SPF | 8.469" | 17% | 1206 / 3373 | 4578 | L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|-------------|---------------|-------------|------------|---------|
| Moment | 16539 ft-lb | 7'10 3/4" | 53447 ft-lb | 0.309 (31%) | 1.25D+1.5L | L |
| Unbraced | 16539 ft-lb | 7'10 3/4" | 49731 ft-lb | 0.333 (33%) | 1.25D+1.5L | L |
| Shear | 4714 lb | 1'1 5/8" | 17394 lb | 0.271 (27%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.109 (L/1707) | 7'10 11/16" | 0.516 (L/360) | 0.210 (21%) | D | Uniform |
| LL Defl inch | 0.254 (L/731) | 7'10 11/16" | 0.516 (L/360) | 0.490 (49%) | L | L |
| TL Defl inch | 0.363 (L/512) | 7'10 11/16" | 0.774 (L/240) | 0.470 (47%) | 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 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 | Tie-In | 0-0-0 to 15-7-10 | (Span)0-7-5 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Point | 0-9-6 | | Far Face | 123 lb | 328 lb | 0 lb | 0 lb | J5 |
| 3 | Part. Uniform | 1-5-6 to 6-9-6 | | Far Face | 97 PLF | 258 PLF | 0 PLF | 0 PLF | |
| 4 | Part. Uniform | 6-9-6 to 10-9-6 | | Far Face | 98 PLF | 261 PLF | 0 PLF | 0 PLF | |
| 5 | Part. Uniform | 10-9-6 to 16-1-6 | | Far Face | 97 PLF | 258 PLF | 0 PLF | 0 PLF | |
| 6 | Tie-In | 15-11-2 to 16-3-4 | (Span)3-8-0 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| | Self Weight | | | | 14 PLF | | | | |

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

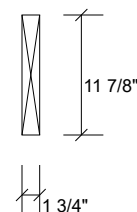
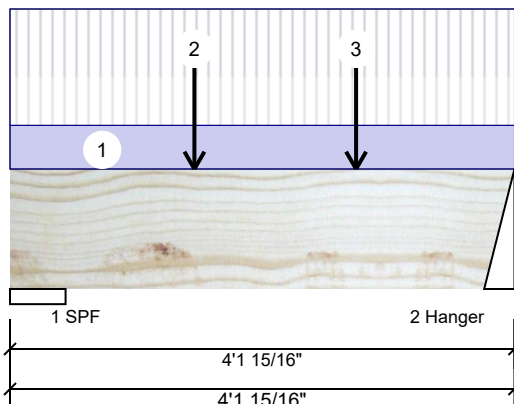


Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
L4A 7X4
905-642-4400



F5-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Second Floor

**Member Information**

| | | | |
|---------------------|--------|----------------|----------------------|
| Type: | Girder | Application: | Floor (Residential) |
| Plies: | 1 | 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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 373 | 151 | 0 | 0 |
| 2 | 366 | 147 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. React D/L lb | Total | Ld. Case | Ld. Comb. |
|------------|--------|-------------------|-------|----------|------------|
| 1 - SPF | 5.500" | 13% 188 / 559 | 748 | L | 1.25D+1.5L |
| 2 - Hanger | 3.000" | 19% 184 / 549 | 733 | L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|-------------------------|-----------|-------------|---------------|------------|------------|---------|
| Moment | 711 ft-lb | 2'3 1/4" | 17130 ft-lb | 0.041 (4%) | 1.25D+1.5L | L |
| Unbraced | 711 ft-lb | 2'3 1/4" | 12369 ft-lb | 0.057 (6%) | 1.25D+1.5L | L |
| Shear | 540 lb | 2'11 13/16" | 5798 lb | 0.093 (9%) | 1.25D+1.5L | L |
| Perm Defl in. (L/29239) | 0.001 | 2'2 1/2" | 0.119 (L/360) | 0.010 (1%) | D | Uniform |
| LL Defl inch (L/11617) | 0.004 | 2'2 9/16" | 0.119 (L/360) | 0.030 (3%) | L | L |
| TL Defl inch (L/8314) | 0.005 | 2'2 9/16" | 0.179 (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.

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 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 4-1-15 | | Top | 30 PLF | 80 PLF | 0 PLF | 0 PLF | |
| 2 | Point | 1-6-4 | | Near Face | 72 lb | 191 lb | 0 lb | 0 lb | J2 |
| 3 | Point | 2-10-4 | | Near Face | 81 lb | 215 lb | 0 lb | 0 lb | J2 |
| | Self Weight | | | | 5 PLF | | | | |

Notes

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

Lumber

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

chemicals**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

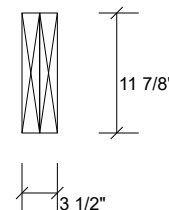
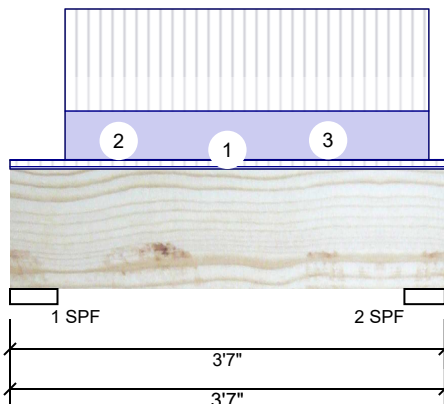
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 1

F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second 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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 470 | 239 | 0 | 0 |
| 2 | 550 | 277 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. React D/L lb | Total Ld. Case | Ld. Comb. |
|---------|--------|-------------------|----------------|------------|
| 1 - SPF | 4.700" | 10% 299 / 704 | 1003 L | 1.25D+1.5L |
| 2 - SPF | 4.000" | 14% 347 / 825 | 1172 L | 1.25D+1.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|-----------------|------------|---------------|------------|------------|---------|
| Moment | 794 ft-lb | 1'9 7/8" | 34261 ft-lb | 0.023 (2%) | 1.25D+1.5L | L |
| Unbraced | 794 ft-lb | 1'9 7/8" | 34261 ft-lb | 0.023 (2%) | 1.25D+1.5L | L |
| Shear | 1016 lb | 1'3 13/16" | 11596 lb | 0.088 (9%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.001 (L/43361) | 1'9 7/8" | 0.100 (L/360) | 0.010 (1%) | D | Uniform |
| LL Defl inch | 0.002 (L/21753) | 1'9 7/8" | 0.100 (L/360) | 0.020 (2%) | L | L |
| TL Defl inch | 0.002 (L/14486) | 1'9 7/8" | 0.149 (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

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- 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 3-7-0 | (Span)1-0-0 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tapered Start | 0-0-0 | | Top | 1 PLF | 0 PLF | 0 PLF | 0 PLF | |
| | End | 3-7-0 | | | 2 PLF | 0 PLF | 0 PLF | 0 PLF | |
| 3 | Part. Uniform | 0-5-7 to 3-5-7 | | Far Face | 150 PLF | 316 PLF | 0 PLF | 0 PLF | |
| | Self Weight | | | | 10 PLF | | | | |

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. 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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

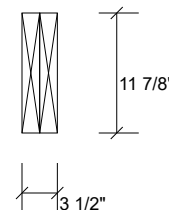
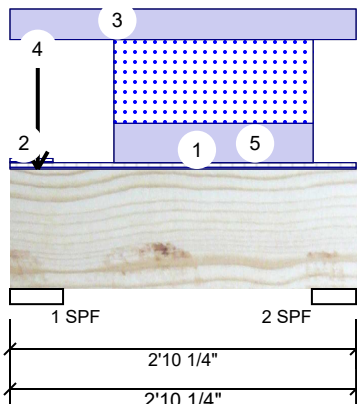
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 2

F8-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second 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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 20 | 514 | 745 | 0 |
| 2 | 17 | 232 | 215 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---------|--------|------|--------------|-------|----------|---------------------|
| 1 - SPF | 5.250" | 16% | 642 / 1128 | 1770 | L | 1.25D+1.5S +0.5L |
| 2 - SPF | 4.375" | 7% | 290 / 331 | 622 | L | 1.25D+1.5S +0.5L |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|--------------------|------------|---------------|------------|---------------------|---------|
| Moment | 318 ft-lb | 1'6 1/16" | 34261 ft-lb | 0.009 (1%) | 1.25D+1.5S +0.5L | L |
| Unbraced | 318 ft-lb | 1'6 1/16" | 34261 ft-lb | 0.009 (1%) | 1.25D+1.5S +0.5L | L |
| Shear | 82 lb | 1'4 3/8" | 11596 lb | 0.007 (1%) | 1.25D+1.5S +0.5L | L |
| Perm Defl in. | 0.000 (L/64863) | 1'5 13/16" | 0.073 (L/360) | 0.010 (1%) | D | Uniform |
| LL Defl inch | 0.000 (L/59654) | 1'6 1/16" | 0.073 (L/360) | 0.010 (1%) | S+0.5L | L |
| TL Defl inch | 0.001 (L/31078) | 1'6" | 0.109 (L/240) | 0.010 (1%) | D+S+0.5L | 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 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.

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

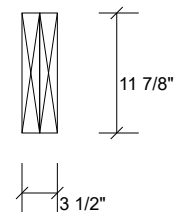
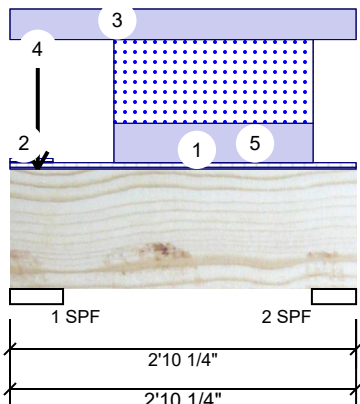
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 2 of 2

F8-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|-----------------|--------------|------|---------|--------|---------|-------|------------------|
| 1 | Tie-In | 0-0-0 to 2-10-4 | (Span)0-7-3 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Tie-In | 0-0-0 to 0-4-4 | (Span)0-4-13 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Part. Uniform | 0-0-0 to 2-10-4 | | Top | 80 PLF | 0 PLF | 0 PLF | 0 PLF | Wall Self Weight |
| 4 | Point | 0-2-12 | | Top | 307 lb | 0 lb | 601 lb | 0 lb | F2 F2 |
| 5 | Part. Uniform | 0-10-5 to 2-6-0 | | Top | 103 PLF | 0 PLF | 219 PLF | 0 PLF | |
| | 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 Structural Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318



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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

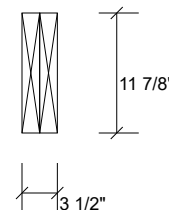
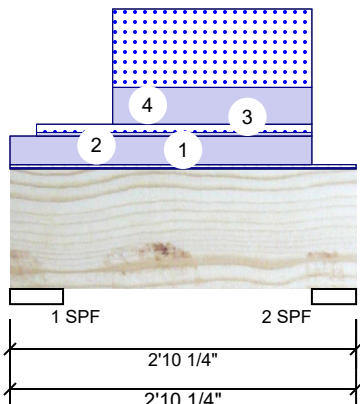
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 1

F8-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second 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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 13 | 217 | 175 | 0 |
| 2 | 12 | 211 | 237 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---------|--------|------|--------------|-------|----------|---------------------|
| 1 - SPF | 5.250" | 5% | 271 / 268 | 540 | L | 1.25D+1.5S +0.5L |
| 2 - SPF | 4.375" | 7% | 263 / 356 | 619 | L | 1.25D+1.5S |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|----------------------------|-----------|------------|---------------|------------|------------|---------|
| Moment | 342 ft-lb | 1'6" | 33918 ft-lb | 0.010 (1%) | 1.25D+1.5S | L |
| Unbraced | 342 ft-lb | 1'6" | 33918 ft-lb | 0.010 (1%) | 1.25D+1.5S | L |
| Shear | 84 lb | 1'4 3/8" | 11480 lb | 0.007 (1%) | 1.25D+1.5S | L |
| Perm Defl in. (L/61871) | 0.000 | 1'5 13/16" | 0.073 (L/360) | 0.010 (1%) | D | Uniform |
| LL Defl inch (L/53786) | 0.000 | 1'6 1/16" | 0.073 (L/360) | 0.010 (1%) | S+0.5L | L |
| TL Defl inch (L/28775) | 0.001 | 1'5 15/16" | 0.109 (L/240) | 0.010 (1%) | D+S+0.5L | 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

- Girders are designed to be supported on the bottom edge only.
- Multiple plies must be fastened together as per manufacturer's details.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- 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 2-10-4 | (Span)0-5-5 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 2 | Part. Uniform | 0-0-0 to 2-5-14 | | Top | 80 PLF | 0 PLF | 0 PLF | 0 PLF | Wall Self Weight |
| 3 | Part. Uniform | 0-2-10 to 2-5-14 | | Top | 10 PLF | 0 PLF | 23 PLF | 0 PLF | |
| 4 | Part. Uniform | 0-10-3 to 2-5-14 | | Top | 103 PLF | 0 PLF | 219 PLF | 0 PLF | |
| | Self Weight | | | | 10 PLF | | | | |

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. 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





EWP Studio
Simpson Strong-Tie®
Component Solutions™

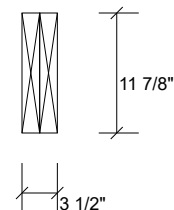
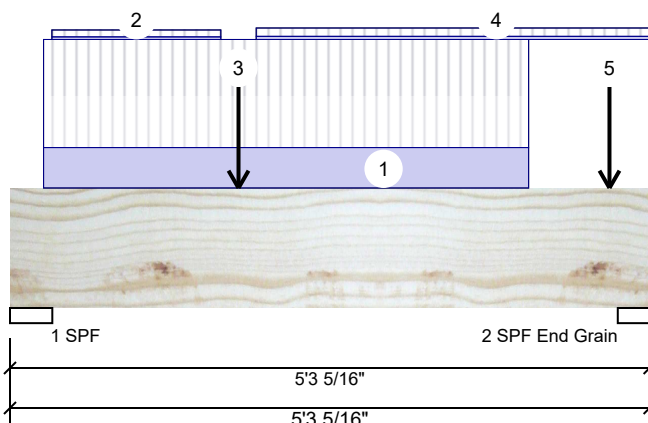
Client:
Project:
Address:

Date: 6/1/2018
Designer: S B
Job Name: CELESTIAL 1 EL-1
Project #:

Page 1 of 1

F9-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second 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 | | |

Unfactored Reactions UNPATTERNED lb (Uplift)

| Brg | Live | Dead | Snow | Wind |
|-----|------|------|------|------|
| 1 | 2238 | 908 | 0 | 0 |
| 2 | 1602 | 647 | 0 | 0 |

Bearings and Factored Reactions

| Bearing | Length | Cap. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|-----------|--------|------|--------------|-------|----------|------------|
| 1 - SPF | 4.188" | 50% | 1135 / 3357 | 4492 | L | 1.25D+1.5L |
| 2 - SPF | 3.153" | 39% | 809 / 2402 | 3211 | L | 1.25D+1.5L |
| End Grain | | | | | | |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|---------------|----------------|-----------|---------------|-------------|------------|---------|
| Moment | 6315 ft-lb | 1'10 5/8" | 34261 ft-lb | 0.184 (18%) | 1.25D+1.5L | L |
| Unbraced | 6315 ft-lb | 1'10 5/8" | 33194 ft-lb | 0.190 (19%) | 1.25D+1.5L | L |
| Shear | 3943 lb | 1'3 5/16" | 11596 lb | 0.340 (34%) | 1.25D+1.5L | L |
| Perm Defl in. | 0.008 (L/7299) | 2'2 5/8" | 0.160 (L/360) | 0.050 (5%) | D | Uniform |
| LL Defl inch | 0.019 (L/2954) | 2'2 5/8" | 0.160 (L/360) | 0.120 (12%) | L | L |
| TL Defl inch | 0.027 (L/2103) | 2'2 5/8" | 0.239 (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

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

| ID | Load Type | Location | Trib Width | Side | Dead | Live | Snow | Wind | Comments |
|----|---------------|-----------------|-------------|-----------|---------|---------|-------|-------|----------|
| 1 | Part. Uniform | 0-3-5 to 4-3-5 | | Far Face | 117 PLF | 313 PLF | 0 PLF | 0 PLF | |
| 2 | Tie-In | 0-4-2 to 1-8-14 | (Span)1-0-0 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 3 | Point | 1-10-10 | | Near Face | 883 lb | 2178 lb | 0 lb | 0 lb | F11 |
| 4 | Tie-In | 2-0-6 to 5-3-5 | (Span)1-2-8 | Top | 15 PSF | 40 PSF | 0 PSF | 0 PSF | |
| 5 | Point | 4-11-5 | | Far Face | 114 lb | 303 lb | 0 lb | 0 lb | J6 |
| | Self Weight | | | | 10 PLF | | | | |

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. 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

NASCOR