

FROM PLAN DATED: NOV-2017

BUILDER: GREENYORK HOMES

SITE: TIBURTINO

MODEL: GEORGIAN 3

ELEVATION: B

LOT: 1

CITY: OAKVILLE

SALESMAN: R D

DESIGNER: AJ

REVISION:

NOTES:
REFER TO THE NORDIC
INSTALLATION GUIDE FOR PROPER
STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2
S.P.F REQ'D UNDER INTERIOR
UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D
UNDER CONCENTRATED LOADS. SEE
FIGURE 1. CANTILEVERED JOISTS
INCLUDING CANT' OVER BRICK REQ.
I-JOIST BLOCKING ALONG BEARING
AND RIMBOARD CLOSURE AT ENDS.
SEE FIGURES 4 & 5 FOR
REINFORCEMENT REQUIREMENTS.
FOR HOLES INCLUDING DUCT
CHASE AND FIELD CUT OPENINGS
SEE FIGURE 7, TABLES 1 & 2.
CERAMIC TILE APPLICATION AS PER
O.B.C 9.30.6.

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

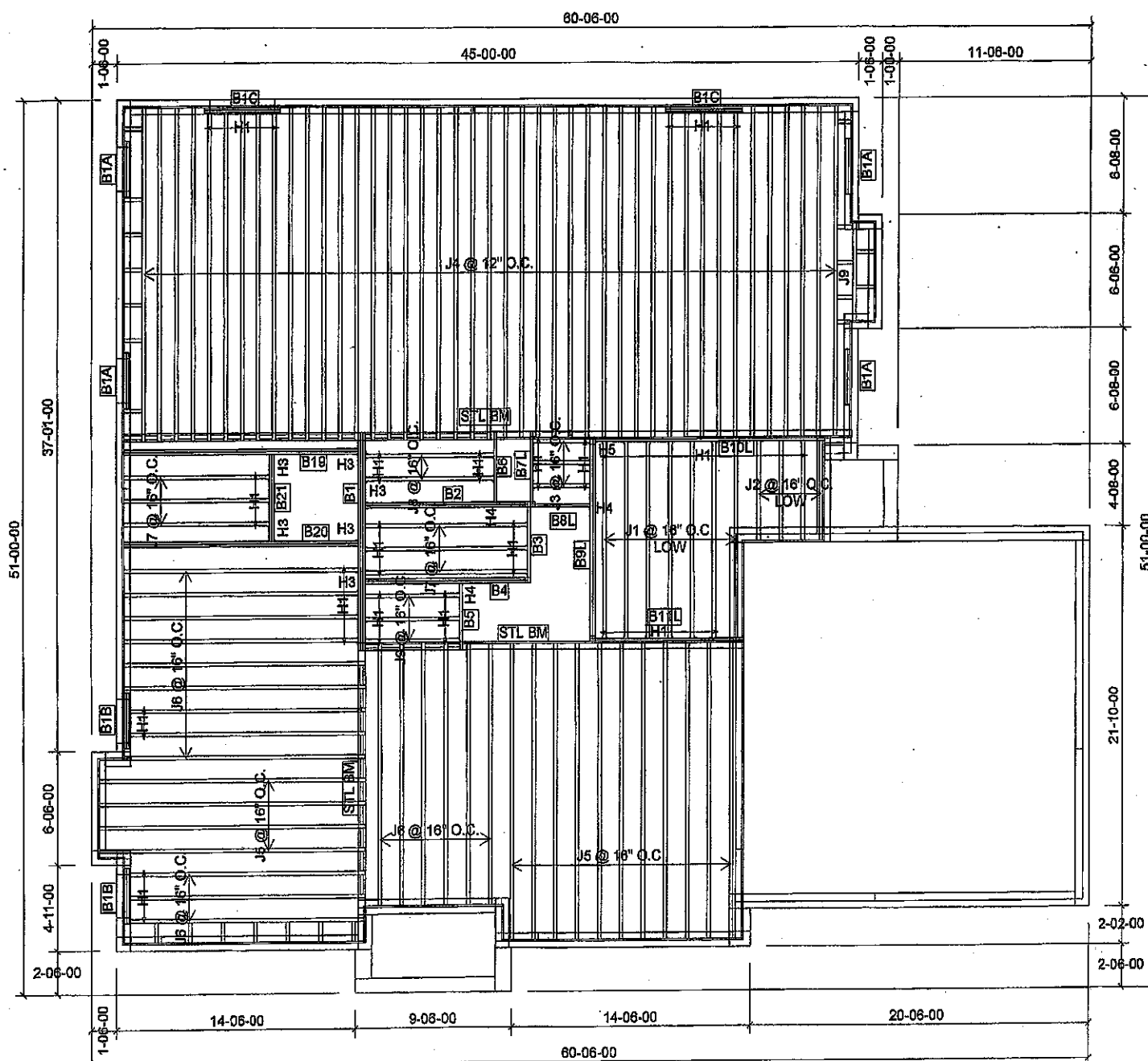
DEAD LOAD: 15.0 lb/ft

TILED AREAS: 20 lb/ft

SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 12/18/2017

1st FLOOR



Products				
PlotID	Length	Product	Plies	Net Qty
J1	12-00-00	9 1/2" NI-40x	1	7
J2	6-00-00	9 1/2" NI-40x	1	4
J3	4-00-00	9 1/2" NI-40x	1	3
J4	20-00-00	11 7/8" NI-40x	1	43
J5	18-00-00	11 7/8" NI-40x	1	15
J6	16-00-00	11 7/8" NI-40x	1	18
J7	10-00-00	11 7/8" NI-40x	1	6
J8	8-00-00	11 7/8" NI-40x	1	2
J9	6-00-00	11 7/8" NI-40x	1	4
B19	16-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	2
B20	16-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	2
B10L	14-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	1	1
B1	14-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	3	3
B9L	12-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	2
B11L	10-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	1	1
B2	10-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	2
B4	10-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	2
B3	6-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	1	1
B6	6-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	1	1
B7L	6-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	1	1
B1C	6-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	4
B21	6-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	2
B5	4-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	1	1
B8L	4-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	1	1
B1A	4-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	8
B1B	4-00-00	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	4

Connector Summary		
Qty	Manuf	Product
19	H1	IUS2.56/11.88
8	H1	IUS2.56/11.88
3	H1	IUS2.56/11.88
18	H1	IUS2.56/11.88
12	H1	IUS2.56/11.88
2	H3	HGUS410
4	H3	HGUS410
3	H4	HUS1.81/10
1	H5	L90

RECEIVED

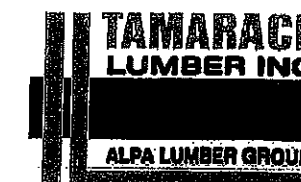
MAR 12 2019

BUILDING DEPARTMENT
TOWN OF OAKVILLE

OK-DAS
Mar 20/19

SITE COPY

19-0247



FROM PLAN DATED: NOV-2017

BUILDER: GREENYORK HOMES

SITE: TIBURTINO

MODEL: GEORGIAN 3

ELEVATION: B

LOT: //

CITY: OAKVILLE

SALESMAN: R D

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NOTES:

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S.P.F. REQ'D UNDER INTERIOR
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SEE FIGURE 7 TABLES 1 & 2 OF THE
INSTALLATION GUIDE. CERAMIC TILE
APPLICATION AS PER O.B.C. 9.30.6
LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

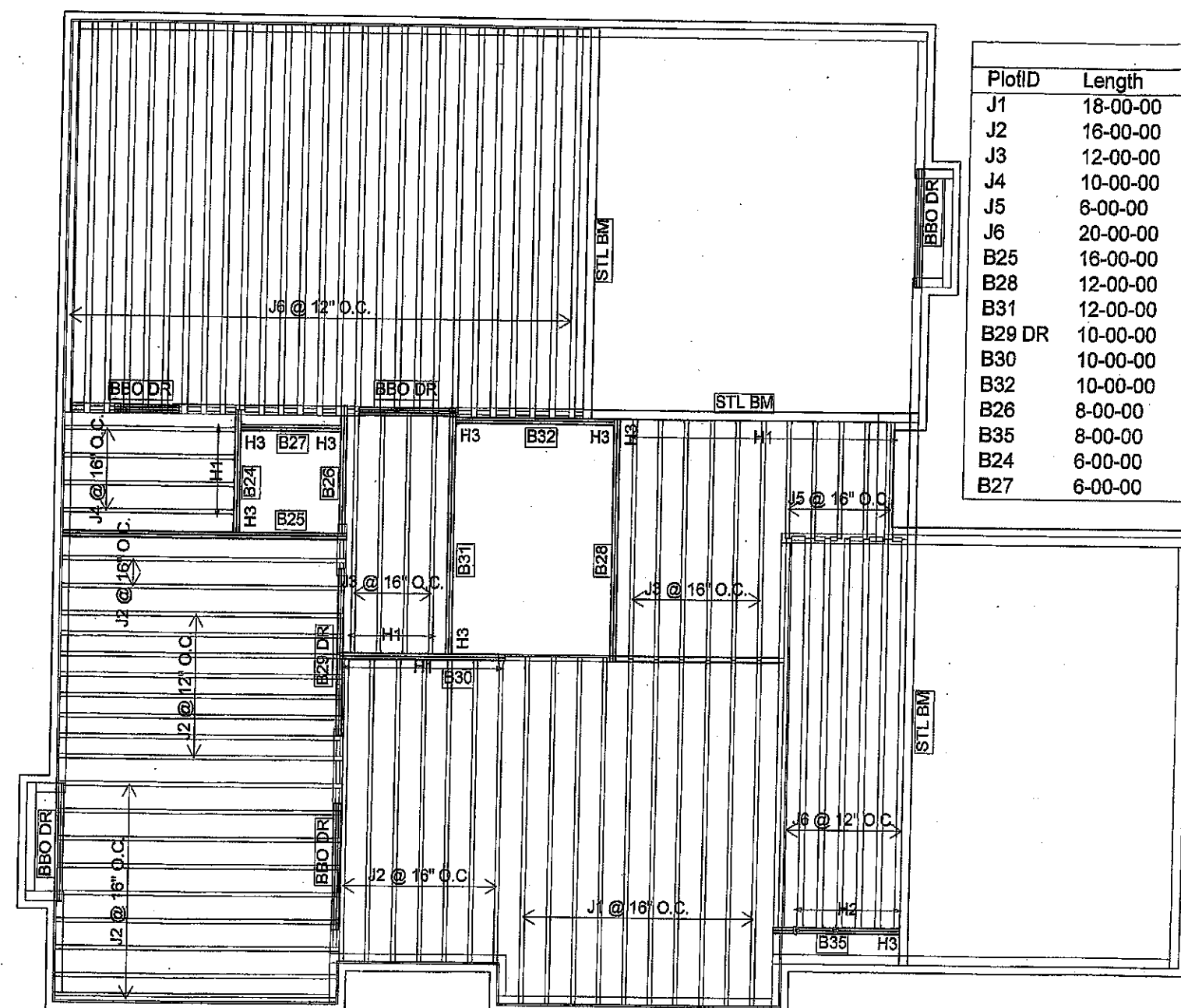
DEAD LOAD: 15.0 lb/ft

TILED AREAS: 20 lb/ft

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 12/18/2017

2nd FLOOR



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	10
J2	16-00-00	11 7/8" NI-40x	1	26
J3	12-00-00	11 7/8" NI-40x	1	10
J4	10-00-00	11 7/8" NI-40x	1	4
J5	6-00-00	11 7/8" NI-40x	1	5
J6	20-00-00	11 7/8" NI-80	1	34
B25	16-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B28	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B31	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B29 DR	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B30	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B32	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B26	8-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B35	8-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B24	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2
B27	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2

Connector Summary		
Qty	Manuf	Product
15	H1	IUS2.56/11.88
11	H1	IUS2.56/11.88
6	H2	IUS3.56/11.88
6	H3	HGUS410
2	H3	HGUS410

NORDIC STRUCTURES

COMPANY
J9 1ST FLOOR
Dec. 15, 2017 15:45

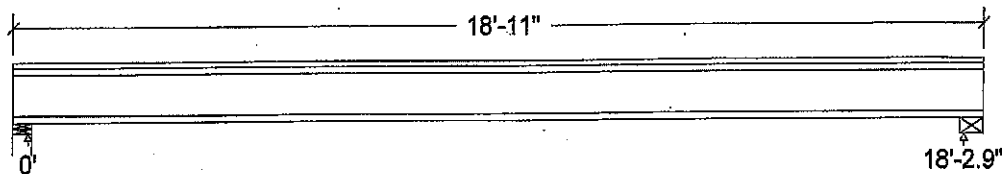
PROJECT
J6 2ND FLOOR
J6 2ND FLOOR

Design Check Calculation Sheet Nordic Sizer - Canada 6.4

Loads:

Load	Type	Distribution	Pat- tern	Location [ft] Start End	Magnitude Start End	Unit
Load1	Dead	Full Area			20.00	psf
Load2	Live	Full Area			40.00	psf

Maximum Reactions (lbs), Bearing Resistances (lbs) and Bearing Lengths (in) :



Unfactored:			
Dead	182		182
Live	365		365
Factored:			
Total	775		775
Bearing:			
Resistance			
Joist	2336		2336
Support	10829		-
Des ratio			
Joist	0.33		0.33
Support	0.07		-
Load case	#2		#2
Length	4-3/8		5-1/2
Min req'd	1-3/4		1-3/4
Stiffener	No		No
Kd	1.00		1.00
KB support	1.00		-
fcp sup	769		-
Kzcp sup	1.15		-

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MAR 12 2019

BUILDING DEPARTMENT
TOWN OF OAKVILLE

Bearing for wall supports is perpendicular-to-grain bearing on top plate. No stud design included.

Nordic Joist 11-7/8" NI-80 Floor joist @ 12" o.c.

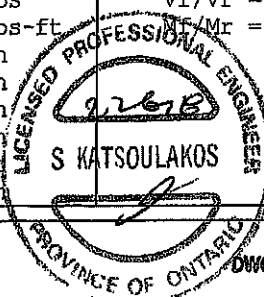
Supports: 1 - Lumber Wall, No.1/No.2; 2 - Steel Beam, W;

Total length: 18'-11.0"; 5/8" nailed and glued OSB sheathing with 1/2" gypsum ceiling

This section PASSES the design code check.

Limit States Design using CSA O86-14 and Vibration Criterion:

Criterion	Analysis Value	Design Value	Unit	Analysis/Design
Shear	Vf = 775	Vr = 2336	lbs	Vf/Vr = 0.33
Moment (+)	Mf = 3535	Mr = 11609	lbs-ft	Mf/Mr = 0.30
Perm. Defl'n	0.09 = <L/999	0.61 = L/360	in	0.15
Live Defl'n	0.19 = <L/999	0.46 = L/480	in	0.41
Total Defl'n	0.28 = L/774	0.91 = L/240	in	0.31
Bare Defl'n	0.21 = <L/999	0.61 = L/360	in	0.34
Vibration	Lmax = 18'-3	Lv = 20'-6	ft	
Defl'n	= 0.026	= 0.034	in	0.76



DWG NO. TAM 10353.18

STRUCTURAL
COMPONENT AND

SITE COPY

19-0247

Additional Data:

FACTORS:	f/E	KD	KH	KZ	KL	KT	KS	KN	LC#
Vr	2336	1.00	1.00	-	-	-	-	-	#2
Mr+	11609	1.00	1.00	-	1.000	-	-	-	#2
EI	547.1 million	-	-	-	-	-	-	-	#2

CRITICAL LOAD COMBINATIONS:

Shear : LC #2 = 1.25D + 1.5L

Moment(+) : LC #2 = 1.25D + 1.5L

Deflection: LC #1 = 1.0D (permanent)

LC #2 = 1.0D + 1.0L (live)

LC #2 = 1.0D + 1.0L (total)

LC #2 = 1.0D + 1.0L (bare joist)

Bearing : Support 1 - LC #2 = 1.25D + 1.5L

Support 2 - LC #2 = 1.25D + 1.5L

Load Types: D=dead W=wind S=snow H=earth,groundwater E=earthquake
L=live(use,occupancy) Ls=live(storage,equipment) f=fire

Load Patterns: s=S/2 L=L+Ls _=no pattern load in this span

All Load Combinations (LCs) are listed in the Analysis output

CALCULATIONS:Deflection: E_{IEff} = 613e06 lb-in² K= 6.18e06 lbs

"Live" deflection = Deflection from all non-dead loads (live, wind, snow...)

Design Notes:

1. WoodWorks analysis and design are in accordance with the 2010 National Building Code of Canada (NBC Part 4) and the CSA O86-14 Engineering Design in Wood standard (May 2014 edition). CONFORMS TO OBC 2012
2. Please verify that the default deflection limits are appropriate for your application.
3. Refer to technical documentation for installation guidelines and construction details.
4. Nordic I-joists are listed in CCMC evaluation report 13032-R.
5. Joists shall be laterally supported at supports and continuously along the compression edge.
6. The design assumptions and specifications have been provided by the client. Any damages resulting from faulty or incorrect information, specifications, and/or designs furnished, and the correctness or accuracy of this information is their responsibility. This analysis does not constitute a record of the structural integrity of the building nor suitability of the design assumptions made. Nordic Structures is responsible only for the structural adequacy of this component based on the design criteria and loadings shown.



DWG NO. TAM 10353-18
STRUCTURAL
COMPONENT ONLY

NORDIC STRUCTURES

COMPANY
J9 1ST FLOOR
Dec. 15, 2017 15:40

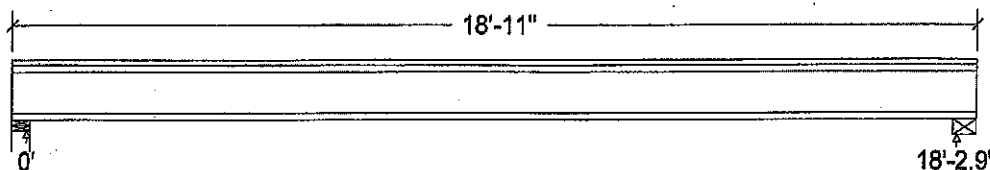
PROJECT
J4 1ST FLOOR
J4 1ST FLOOR

Design Check Calculation Sheet Nordic Sizer – Canada 6.4

Loads:

Load	Type	Distribution	Pat- tern	Location [ft] Start End	Magnitude Start End	Unit
Load1	Dead	Full Area			20.00	psf
Load2	Live	Full Area			40.00	psf

Maximum Reactions (lbs), Bearing Resistances (lbs) and Bearing Lengths (in) :



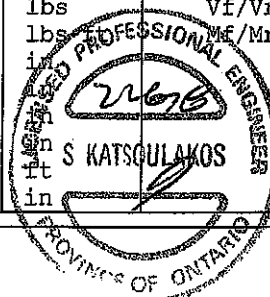
Unfactored:			
Dead	182		182
Live	365		365
Factored:			
Total	775		775
Bearing:			
Resistance			
Joist	2336		2336
Support	7735		-
Des ratio			
Joist	0.33		0.33
Support	0.10		-
Load case	#2		#2
Length	4-3/8		5-1/2
Min req'd	1-3/4		1-3/4
Stiffener	No		No
Kd	1.00		1.00
KB support	1.00		-
fcp sup	769		-
Kzcp sup	1.15		-

Bearing for wall supports is perpendicular-to-grain bearing on top plate. No stud design included.

Nordic Joist 11-7/8" NI-40x Floor joist @ 12" o.c.
Supports: 1 - Lumber Wall, No.1/No.2; 2 - Steel Beam, W;
Total length: 18'-11.0"; 3/4" nailed and glued OSB sheathing
This section PASSES the design code check.

Limit States Design using CSA O86-14 and Vibration Criterion:

Criterion	Analysis Value	Design Value	Unit	Analysis/Design
Shear	Vf = 775	Vr = 2336	lbs	Vf/Vr = 0.33
Moment (+)	Mf = 3535	Mr = 6255	lbs	Mf/Mr = 0.57
Perm. Defl'n	0.13 = <L/999	0.61 = L/360	in	0.21
Live Defl'n	0.25 = L/873	0.46 = L/480	in	0.55
Total Defl'n	0.38 = L/582	0.91 = L/240	in	0.41
Bare Defl'n	0.29 = L/743	0.61 = L/360	in	0.48
Vibration	Lmax = 18'-3	Lv = 19'-6	ft	
Defl'n	= 0.029	= 0.034	in	0.84



DWG NO. TAM 10354-88
STRUCTURAL
COMPONENT ONLY

Additional Data:

FACTORS:	f/E	KD	KH	KZ	KL	KT	KS	KN	LC#
Vr	2336	1.00	1.00	-	-	-	-	-	#2
Mr+	6255	1.00	1.00	-	1.000	-	-	-	#2
EI	371.1 million	-	-	-	-	-	-	-	#2

CRITICAL LOAD COMBINATIONS:

Shear : LC #2 = 1.25D + 1.5L

Moment(+) : LC #2 = 1.25D + 1.5L

Deflection: LC #1 = 1.0D (permanent)

LC #2 = 1.0D + 1.0L (live)

LC #2 = 1.0D + 1.0L (total)

LC #2 = 1.0D + 1.0L (bare joist)

Bearing : Support 1 - LC #2 = 1.25D + 1.5L

Support 2 - LC #2 = 1.25D + 1.5L

Load Types: D=dead W=wind S=snow H=earth, groundwater E=earthquake
L=live(use, occupancy) Ls=live(storage, equipment) f=fire

Load Patterns: s=S/2 L=L+Ls _no pattern load in this span

All Load Combinations (LCs) are listed in the Analysis output

CALCULATIONS:Deflection: E_Ieff = 443e06 lb-in² K= 6.18e06 lbs

"Live" deflection = Deflection from all non-dead loads (live, wind, snow...)

Design Notes:

1. WoodWorks analysis and design are in accordance with the 2010 National Building Code of Canada (NBC Part 4) and the CSA O86-14 Engineering Design in Wood standard (May 2014 edition).

CONFORMS TO OBC 2012

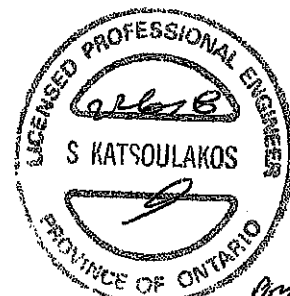
2. Please verify that the default deflection limits are appropriate for your application.

3. Refer to technical documentation for installation guidelines and construction details.

4. Nordic I-joists are listed in CCMC evaluation report 13032-R.

5. Joists shall be laterally supported at supports and continuously along the compression edge.

6. The design assumptions and specifications have been provided by the client. Any damages resulting from faulty or incorrect information, specifications, and/or designs furnished, and the correctness or accuracy of this information is their responsibility. This analysis does not constitute a record of the structural integrity of the building nor suitability of the design assumptions made. Nordic Structures is responsible only for the structural adequacy of this component based on the design criteria and loadings shown.



DWG NO. TAM/0354-08
STRUCTURAL
COMPONENT ONLY



Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B1(i2046)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:26

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

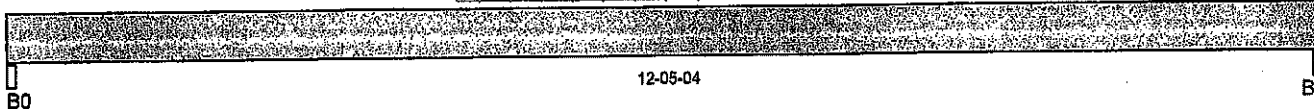
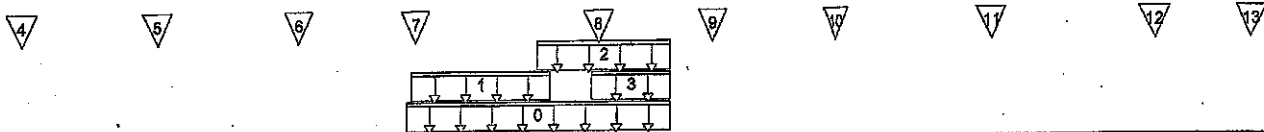
Description: Designs\Flush Beams\Basement\Flush Beams\B1(i2046)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 12-05-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-1/4"	4,715 / 0	3,147 / 0		
B1, 5-1/4"	3,875 / 0	2,890 / 0		

Load Summary

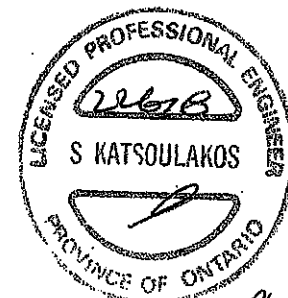
Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	8(i966)	Unf. Lin. (lb/ft)	L	04-02-10	06-08-10		81			n/a
1	8(i966)	Unf. Lin. (lb/ft)	L	04-03-02	05-07-02	278	139			n/a
2	8(i966)	Unf. Lin. (lb/ft)	L	05-05-08	06-08-10	426	615			n/a
3	8(i966)	Unf. Lin. (lb/ft)	L	05-11-10	06-08-10		382			n/a
4	-	Conc. Pt. (lbs)	L	00-07-00	00-07-00	384	145			n/a
5	-	Conc. Pt. (lbs)	L	01-10-09	01-10-09	540	270			n/a
6	-	Conc. Pt. (lbs)	L	03-02-10	03-02-10	516	258			n/a
7	-	Conc. Pt. (lbs)	L	04-03-10	04-03-10	3,125	1,713			n/a
8	-	Conc. Pt. (lbs)	L	06-00-06	06-00-06	971	588			n/a
9	J7(i2107)	Conc. Pt. (lbs)	L	07-01-04	07-01-04	263	131			n/a
10	B2(i2006)	Conc. Pt. (lbs)	L	08-03-04	08-03-04	398	260			n/a
11	J8(i2162)	Conc. Pt. (lbs)	L	09-09-04	09-09-04	245	122			n/a
12	-	Conc. Pt. (lbs)	L	11-03-12	11-03-12	790	498			n/a
13	4(i932)	Conc. Pt. (lbs)	L	12-02-12	12-02-12	301	289			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	36,671 ft-lbs	60,415 ft-lbs	60.7%	1	05-05-14
End Shear	10,277 lbs	21,696 lbs	47.4%	1	01-05-02
Total Load Defl.	L/340 (0.413")	0.584"	70.7%	4	05-11-10
Live Load Defl.	L/586 (0.239")	0.39"	61.4%	5	05-11-10
Max Defl.	0.413"	n/a	n/a	4	05-11-10
Span / Depth	11.8	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Beam	5-1/4" x 5-1/4"	11,006 lbs	93.5%	32.7%	Unspecified
B1 Beam	5-1/4" x 5-1/4"	9,425 lbs	80%	28%	Unspecified

Notes

Page 1 of 2



DWG NO. TAM 10355-18
STRUCTURAL
COMPONENT ONLY



Boise Cascade

Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B1(i2046)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:26

BC CALC® Design Report

Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B1(i2046)

Specifier:

Designer:

Company:

Misc:

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

CONFORMS TO OBC 2012

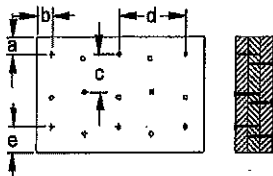
Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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Connection Diagram

a minimum = 4" c = 3-7/16"
 b minimum = 3" d = 4"
 e minimum = 3"

Calculated Side Load = 493.2 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Nailing schedule applies to both sides of the member.

Connectors are: 16d Nails

3-1/2" ARDOX SPIRAL

DWG NO. TAM 10355-18
 STRUCTURAL
 COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basementl...B2(i2006)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:28

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

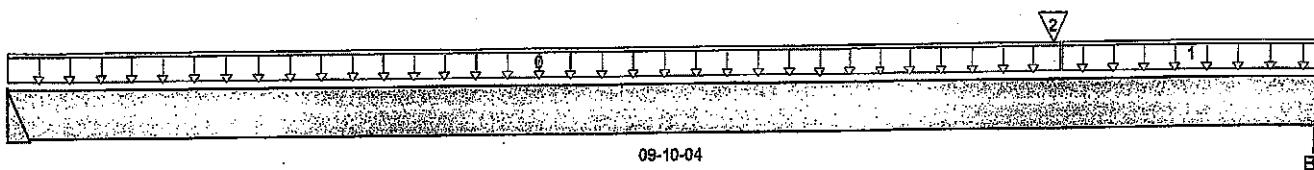
Description: Designs\Flush Beams\Basement\Flush Beams\B2(i2006)

Specifier:

Designer:

Company:

Misc:



B0

B1

Total Horizontal Product Length = 09-10-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	385 / 0	254 / 0		
B1, 1-3/4"	720 / 0	428 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-10-14	53	27			n/a
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	07-10-14	09-10-04	26	13			n/a
2	B6(i2018)	Conc. Pt. (lbs)	L	07-10-00	07-10-00	632	327			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	3,030 ft-lbs	38,727 ft-lbs	7.8%	1	07-00-00
End Shear	1,534 lbs	14,464 lbs	10.6%	1	08-08-10
Total Load Defl.	L/999 (0.036")	n/a	n/a	4	05-02-11
Live Load Defl.	L/999 (0.022")	n/a	n/a	5	05-02-11
Max Defl.	0.036"	n/a	n/a	4	05-02-11
Span / Depth	9.8	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 3-1/2"	895 lbs	n/a	10.5%	Hanger
B1 Post	1-3/4" x 3-1/2"	1,614 lbs	40.6%	21.6%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012



DWG NO. TAM 10356-18
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\...\B2(i2006)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:28

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B2(i2006)

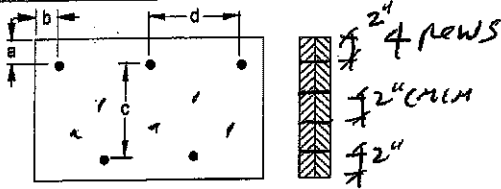
Specifier:

Designer:

Company:

Misc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 6"

Calculated Side Load = 137.7 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

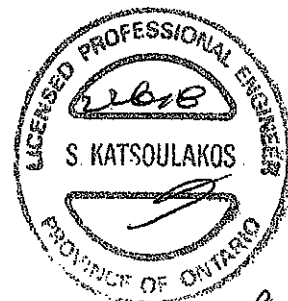
Connectors are: Nails

3-1/2" ARDOX SPIRAL

Disclosure

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DWG NO. TAM 10356.8
STRUCTURAL
COMPONENT ONLY



Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B3(i2038)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:28

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

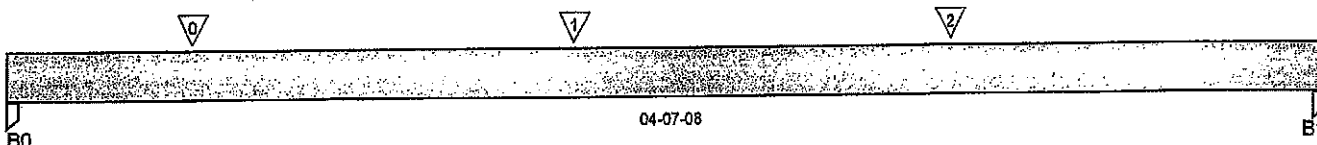
Description: Designs\Flush Beams\Basement\Flush Beams\B3(i2038)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 04-07-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	401 / 0	214 / 0		
B1, 3-1/2"	325 / 0	177 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trlb.
0 J7(i2038)	Conc. Pt. (lbs)	L	00-07-12	00-07-12	196	98			n/a
1 J7(i2026)	Conc. Pt. (lbs)	L	01-11-12	01-11-12	271	135			n/a
2 J7(i2107)	Conc. Pt. (lbs)	L	03-03-12	03-03-12	259	130			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	951 ft-lbs	19,364 ft-lbs	4.9%	1	01-11-12
End Shear	699 lbs	7,232 lbs	9.7%	1	03-04-02
Total Load Defl.	L/999 (0.004")	n/a	n/a	4	02-03-12
Live Load Defl.	L/999 (0.003")	n/a	n/a	5	02-03-12
Max Defl.	0.004"	n/a	n/a	4	02-03-12
Span / Depth	4.2	n/a	n/a		00-00-00

Disclosure

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Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	3-1/2" x 1-3/4"	869 lbs	21.8%	11.6%	Unspecified
B1 Post	3-1/2" x 1-3/4"	708 lbs	17.8%	9.5%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012

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Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\...\B4(12143)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:29

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

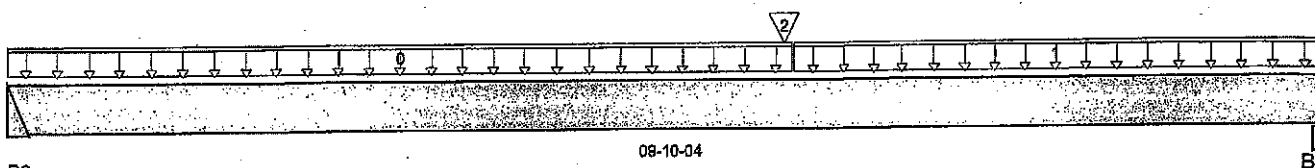
Description: Designs\Flush Beams\Basement\Flush Beams\B4(12143)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 09-10-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	359 / 0	243 / 0		
B1, 1-3/4"	425 / 0	278 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0 FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	05-10-04	27	13			n/a
1 FC2 Floor Material	Unf. Lin. (lb/ft)	L	05-10-04	09-10-04	13	6			n/a
2 B5(12090)	Conc. Pt. (lbs)	L	05-09-06	05-09-06	576	298			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	3,578 ft-lbs	38,727 ft-lbs	9.2%	1	05-09-06
End Shear	937 lbs	14,464 lbs	6.5%	1	08-08-10
Total Load Defl.	L/999 (0.037")	n/a	n/a	4	05-00-11
Live Load Defl.	L/999 (0.023")	n/a	n/a	5	05-00-11
Max Defl.	0.037"	n/a	n/a	4	05-00-11
Span / Depth	9.8	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 3-1/2"	841 lbs	n/a	9.9%	Hanger
B1 Post	1-3/4" x 3-1/2"	985 lbs	24.8%	13.2%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA 086.

CONFORMS TO OBC 2012

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9





Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement...B4(I2143)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:29

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B4(I214

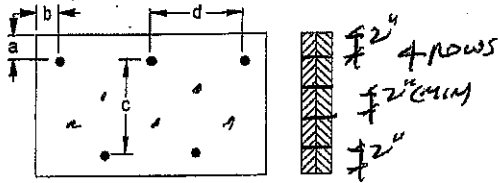
Specifier:

Designer:

Company:

Misc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 4"

Calculated Side Load = 125.5 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

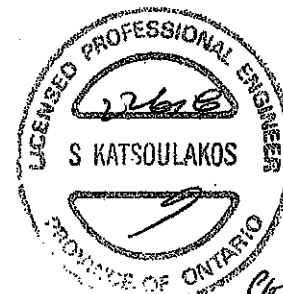
Connectors are: Nails

3-1/2" ARDOX SPIRAL

Disclosure

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DWG NO. TAM 10358-78
STRUCTURAL
COMPONENT ONLY



Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basment\Flush Beams\B5(i2090)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:29

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

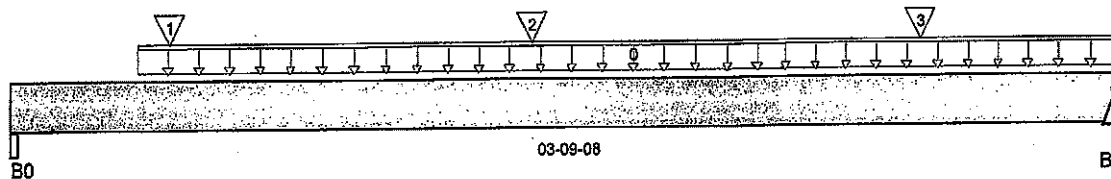
Description: Designs\Flush Beams\Basment\Flush Beams\B5(i2090)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 03-09-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-1/4"	581 / 0	302 / 0		
B1	599 / 0	310 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	User Load	Unf. Lin. (lb/ft)	L	00-05-04	03-09-08	240	120			n/a
1	J9(i2095)	Conc. Pt. (lbs)	L	00-06-08	00-06-08	91	45			n/a
2	J9(i2141)	Conc. Pt. (lbs)	L	01-09-04	01-09-04	154	77			n/a
3	J9(i2101)	Conc. Pt. (lbs)	L	03-01-04	03-01-04	130	65			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,043 ft-lbs	19,364 ft-lbs	5.4%	1	01-09-14
End Shear	562 lbs	7,232 lbs	7.8%	1	01-05-02
Total Load Defl.	L/999 (0.003")	n/a	n/a	4	02-00-08
Live Load Defl.	L/999 (0.002")	n/a	n/a	5	02-00-08
Max Defl.	0.003"	n/a	n/a	4	02-00-08
Span / Depth	3.3	n/a	n/a		00-00-00

Disclosure

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Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Beam	5-1/4" x 1-3/4"	1,250 lbs	31.9%	11.2%	Unspecified
B1 Hanger	2" x 1-3/4"	1,286 lbs	n/a	30.1%	Hanger

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

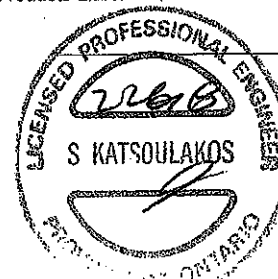
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012

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Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B6(i2018)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:29

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

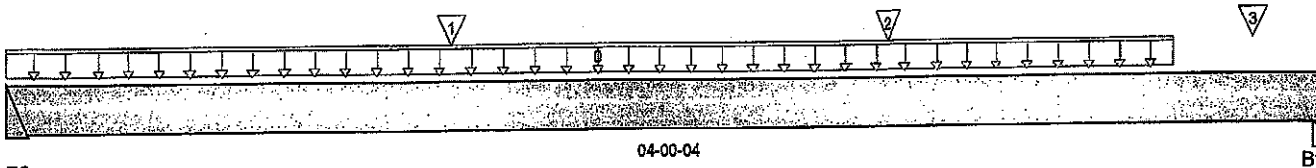
Description: Designs\Flush Beams\Basement\Flush Beams\B6(i2018)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 04-00-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	649 / 0	336 / 0		
B1, 5-1/4"	732 / 0	399 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	User Load	Unf. Lin. (lb/ft)	L	00-00-00	03-07-00	240	120			n/a
1	J8(i2162)	Conc. Pt. (lbs)	L	01-04-04	01-04-04	228	114			n/a
2	J8(i2105)	Conc. Pt. (lbs)	L	02-08-04	02-08-04	188	94			n/a
3	5(i933)	Conc. Pt. (lbs)	L	03-09-12	03-09-12	96	68			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,311 ft-lbs	19,364 ft-lbs	6.8%	1	01-08-14
End Shear	800 lbs	7,232 lbs	11.1%	1	02-07-02
Total Load Defl.	L/999 (0.004")	n/a	n/a	4	01-10-05
Live Load Defl.	L/999 (0.003")	n/a	n/a	5	01-10-05
Max Defl.	0.004"	n/a	n/a	4	01-10-05
Span / Depth	3.6	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 1-3/4"	1,393 lbs	n/a	32.6%	Hanger
B1 Beam	5-1/4" x 1-3/4"	1,597 lbs	40.7%	14.2%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

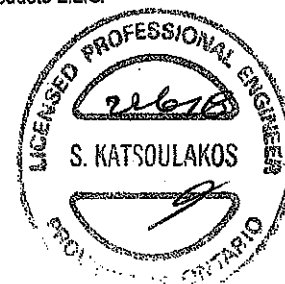
Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012**Disclosure**

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Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\Flush Beams\B7L(i861)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:29

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

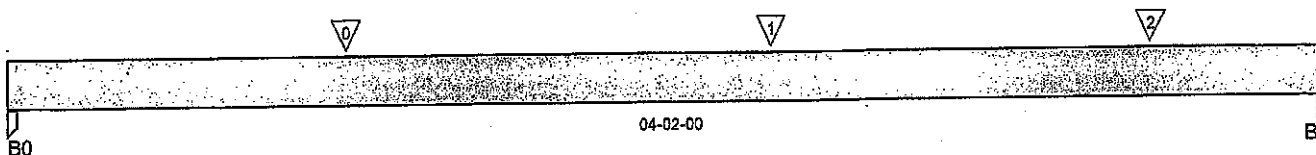
Description: Designs\Flush Beams\Basement\Flush Beams\B7L(i861)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 04-02-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 1-3/4"	117 / 0	70 / 0		
B1, 3-1/2"	132 / 0	79 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	J3(i885)	Conc. Pt. (lbs)	L	01-00-12	01-00-12	97	48			n/a
1	J3(i884)	Conc. Pt. (lbs)	L	02-04-12	02-04-12	101	51			n/a
2	J3(i889)	Conc. Pt. (lbs)	L	03-07-08	03-07-08	51	25			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	313 ft-lbs	19,364 ft-lbs	1.6%	1	02-04-12
End Shear	240 lbs	7,232 lbs	3.3%	1	01-01-10
Total Load Defl.	L/999 (0.001")	n/a	n/a	4	02-00-00
Live Load Defl.	L/999 (0.001")	n/a	n/a	5	02-00-00
Max Defl.	0.001"	n/a	n/a	4	02-00-00
Span / Depth	3.9	n/a	n/a		00-00-00

Disclosure

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Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	1-3/4" x 1-3/4"	263 lbs	13.2%	7%	Unspecified
B1 Post	3-1/2" x 1-3/4"	297 lbs	7.5%	4%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Calculations assume unbraced length of Top: 00-05-04, Bottom: 00-05-04.
 Resistance Factor phi has been applied to all presented results per CSA O86.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012

BC CALCO®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.



DWG NO. TARR-10961-08
 STRUCTURAL
 COMPONENT ONLY



Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\...\B8L(i2190)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:30

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

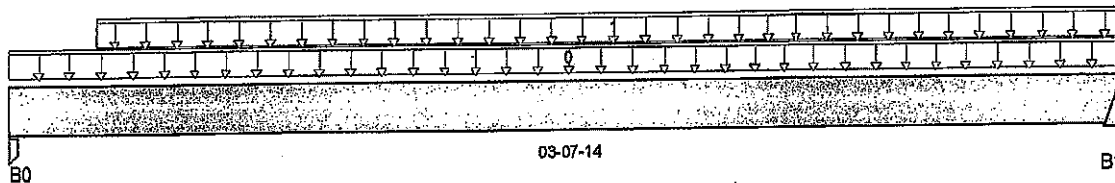
Description: Designs\Flush Beams\Basement\Flush Beams\B8L(i2190

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 03-07-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	430 / 0	226 / 0		
B1	466 / 0	244 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.85	Snow 1.00	Wind 1.15	Trib.
0 FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-07-14	24	12			n/a
1 User Load	Unf. Lin. (lb/ft)	L	00-03-08	03-07-14	240	120			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	785 ft-lbs	19,364 ft-lbs	4.1%	1	01-10-11
End Shear	347 lbs	7,232 lbs	4.8%	1	01-03-06
Total Load Defl.	L/999 (0.002")	n/a	n/a	4	01-10-11
Live Load Defl.	L/999 (0.001")	n/a	n/a	5	01-10-11
Max Defl.	0.002"	n/a	n/a	4	01-10-11
Span / Depth	3.4	n/a	n/a		00-00-00

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	3-1/2" x 1-3/4"	927 lbs	23.3%	12.4%	Unspecified
B1 Hanger	2" x 1-3/4"	1,004 lbs	n/a	23.5%	Hanger

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Calculations assume member is fully braced.
 Resistance Factor phi has been applied to all presented results per CSA O86.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012

BC CALO®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.



DESIGN NO. TAM/0962-13
 STRUCTURAL
 COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\...\B9L(i2191)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:30

BC CALCC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

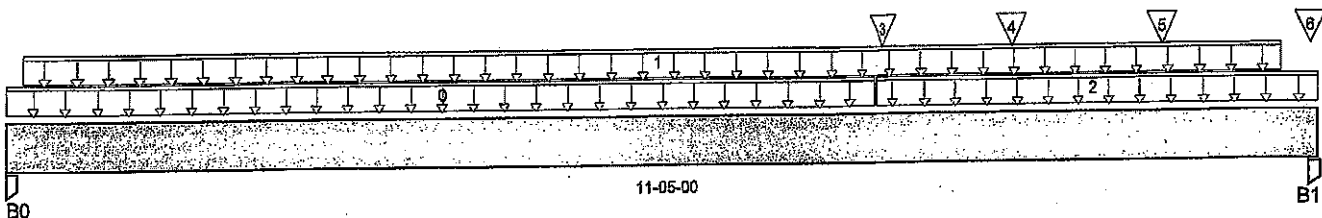
Description: Designs\Flush Beams\Basement\Flush Beams\B9L(i2191

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 11-05-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 1-3/4"	270 / 0	536 / 0		
B1, 3-1/2"	1,991 / 0	1,443 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0 FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-06-08	17	9			n/a
1 User Load	Unf. Lin. (lb/ft)	L	00-01-12	11-01-08		60			n/a
2 FC1 Floor Material	Unf. Lin. (lb/ft)	L	07-06-08	11-05-00	14	7			n/a
3 B8L(i2190)	Conc. Pt. (lbs)	L	07-07-06	07-07-06	445	233			n/a
4 J3(i885)	Conc. Pt. (lbs)	L	08-09-00	08-09-00	93	47			n/a
5 J3(i884)	Conc. Pt. (lbs)	L	10-01-00	10-01-00	101	51			n/a
6 -	Conc. Pt. (lbs)	L	11-04-02	11-04-02	1,431	756			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	4,514 ft-lbs	38,727 ft-lbs	11.7%	1	07-07-06
End Shear	1,566 lbs	14,464 lbs	10.8%	1	10-01-10
Total Load Defl.	L/999 (0.07")	n/a	n/a	6	05-11-04
Live Load Defl.	L/999 (0.029")	n/a	n/a	8	06-00-08
Max Defl.	0.07"	n/a	n/a	6	05-11-04
Span / Depth	11.2	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	1-3/4" x 3-1/2"	750 lbs	29%	15.4%	Unspecified
B1 Post	3-1/2" x 3-1/2"	4,789 lbs	60.2%	32%	Unspecified

Notes



DWG NO. TAM 103638
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement... \B9L(i2191)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:30

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B9L(i21

Specifier:

Designer:

Company:

Misc:

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

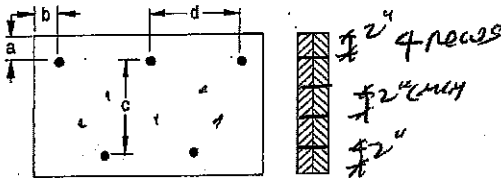
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

CONFORMS TO OBC 2012

Importance Factor: Normal Part code: Part 9

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 4"

Calculated Side Load = 261.3 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

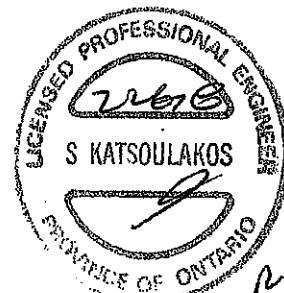
Connectors are: 3-1/2" ARDOX SPIRAL Nails

3-1/2" ARDOX SPIRAL

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current installation Guide and applicable building codes. To obtain installation Guide or ask questions, please call 1-800-964-6999 before installation.

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DWG NO. TAM 15369-18
STRUCTURAL
COMPONENT ONLY



Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement...B10L(1915)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:30

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

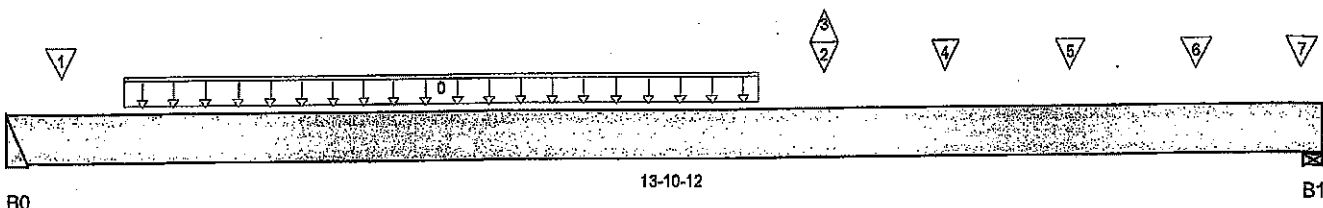
Description: Designs\Flush Beams\Basement\Flush Beams\B10L(191

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 13'-10"

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	1,389 / 0	736 / 0		
B1, 5-1/2"	977 / 1	545 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	Smoothed Load	Unf. Lin. (lb/ft)	L	01-02-12	07-10-12	231	116			n/a
1	J1(1882)	Conc. Pt. (lbs)	L	00-06-12	00-06-12	243	122			n/a
2	J1(1956)	Conc. Pt. (lbs)	L	08-06-12	08-06-12	138	69			n/a
3	J1(1956)	Conc. Pt. (lbs)	L	08-06-12	08-06-12	-1				n/a
4	J2(1910)	Conc. Pt. (lbs)	L	09-10-12	09-10-12	152	76			n/a
5	J2(1949)	Conc. Pt. (lbs)	L	11-02-12	11-02-12	152	76			n/a
6	J2(1917)	Conc. Pt. (lbs)	L	12-06-12	12-06-12	141	70			n/a
7	E39(1910)	Conc. Pt. (lbs)	L	13-08-00	13-08-00		15			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	9,277 ft-lbs	19,364 ft-lbs	47.9%	1	05-10-12
End Shear	2,685 lbs	7,232 lbs	37.1%	1	01-01-14
Total Load Defl.	L/381 (0.422")	0.67"	63%	6	06-06-12
Live Load Defl.	L/584 (0.275")	0.447"	61.7%	8	08-06-12
Max Defl.	0.422"	n/a	n/a	6	06-06-12
Span / Depth	13.5	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 1-3/4"	3,005 lbs	n/a	70.4%	Hanger
B1 Wall/Plate	5-1/2" x 1-3/4"	2,147 lbs	52.2%	18.3%	Unspecified

Notes



DWG NO. TAM/0364-18
STRUCTURAL
COMPONENT ONLY



Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\...\B10L(i1915)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:30

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B10L(i1

Specifier:

Designer:

Company:

Misc:

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA

O86.

Design based on Dry Service Condition.

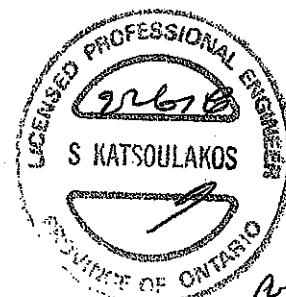
Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012

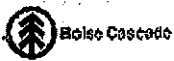
Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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DWG NO. TAM/0364/18
STRUCTURAL
COMPONENT ONLY



Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\...\B11L(i869)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:30

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

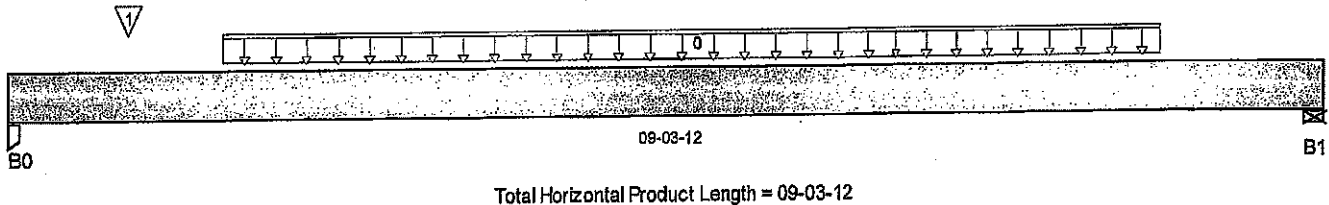
Description: Designs\Flush Beams\Basement\Flush Beams\B11L(i869

Specifier:

Designer:

Company:

Misc:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	953 / 0	504 / 0		
B1, 5-1/2"	838 / 0	448 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	Smoothed Load	Unf. Lin. (lb/ft)	L	01-08-04	08-02-04	231	116			n/a
1	J1(i882)	Conc. Pt. (lbs)	L	00-10-04	00-10-04	251	126			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	4,686 ft-lbs	19,364 ft-lbs	24.2%	1	04-10-04
End Shear	1,820 lbs	7,232 lbs	25.2%	1	01-03-06
Total Load Defl.	L/999 (0.091")	n/a	n/a	4	04-07-04
Live Load Defl.	L/999 (0.06")	n/a	n/a	5	04-07-04
Max Defl.	0.091"	n/a	n/a	4	04-07-04
Span / Depth	8.8	n/a	n/a		00-00-00

Disclosure

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Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Post	3-1/2" x 1-3/4"	2,060 lbs	51.8%	27.6%	Unspecified
B1 Wall/Plate	5-1/2" x 1-3/4"	1,816 lbs	44.2%	15.5%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Calculations assume member is fully braced.
 Resistance Factor phi has been applied to all presented results per CSA O86.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012

BC CALCO®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.





Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\...\B1A(i2158)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:31

BC CALC@ Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

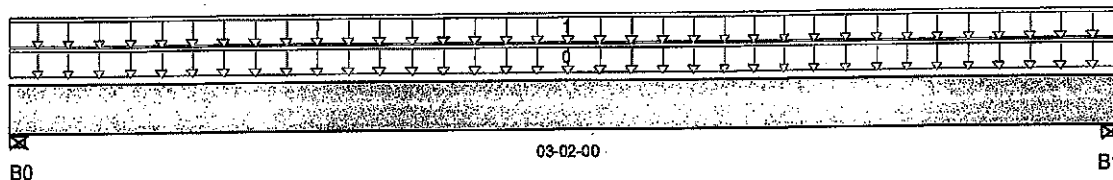
Description: Designs\Flush Beams\Basement\Flush Beams\B1A(i2158)

Specifier:

Designer:

Company:

Msc:



Total Horizontal Product Length = 03-02-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4"	63 / 0	117 / 0		
B1, 4"	63 / 0	117 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0 E27(i912)	Unf. Lin. (lb/ft)	L	00-00-00	03-02-00	15	50			n/a
1 FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-02-00	25	12			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	89 ft-lbs	25,173 ft-lbs	0.4%	0	01-07-00
End Shear	27 lbs	9,401 lbs	0.3%	0	01-03-14
Total Load Defl.	L/999 (0")	n/a	n/a	4	01-07-00
Live Load Defl.	L/999 (0")	n/a	n/a	5	01-07-00
Max Defl.	0"	n/a	n/a	4	01-07-00
Span / Depth	2.7	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	4" x 3-1/2"	164 lbs	4.2%	1.5%	Unspecified
B1 Wall/Plate	4" x 3-1/2"	164 lbs	4.2%	1.5%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

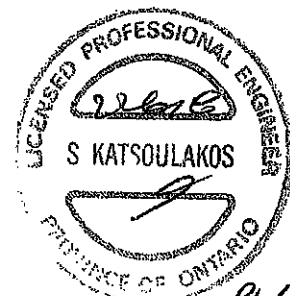
Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC@ analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

CONFORMS TO OBC 2012

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



DWG NO. TAM/03669
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basementl...B1A(i2158)

Dry | 1 span | No cantilevers | 0/12 slope(deg)

December 15, 2017 12:11:31

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B1A(i21

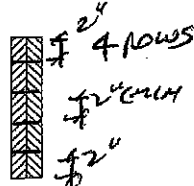
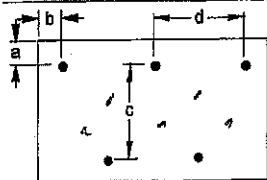
Specifier:

Designer:

Company:

Misc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 6"

Member has no side loads.

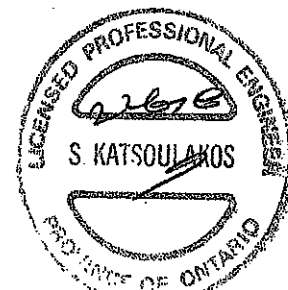
Connectors are: 16d Nails

3-1/2" ARDOX SPIRAL

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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DWG NO. TAM/0366
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basementl...B1C(12013)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:31

BCALC@ Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

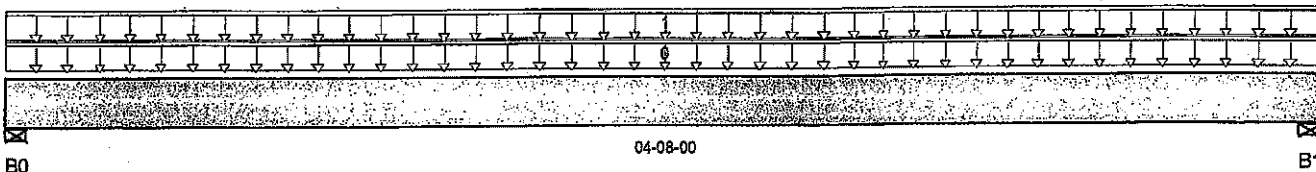
Description: Designs\Flush Beams\Basement\Flush Beams\B1C(12013

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 04-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4"	1,394 / 0	820 / 0		
B1, 4"	1,381 / 0	812 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0 Smoothed Load	Unf. Lin. (lb/ft)	L	00-00-00	04-08-00	398	199			n/a
1 E44(1905)	Unf. Lin. (lb/ft)	L	00-00-00	04-08-00	191	136			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,731 ft-lbs	38,727 ft-lbs	7.1%	1	02-03-14
End Shear	1,683 lbs	14,464 lbs	11.6%	1	01-03-14
Total Load Defl.	L/999 (0.006")	n/a	n/a	4	02-03-14
Live Load Defl.	L/999 (0.004")	n/a	n/a	5	02-03-14
Max Defl.	0.006"	n/a	n/a	4	02-03-14
Span / Depth	4.2	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	4" x 3-1/2"	3,116 lbs	52.1%	18.2%	Unspecified
B1 Wall/Plate	4" x 3-1/2"	3,086 lbs	51.6%	18.1%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

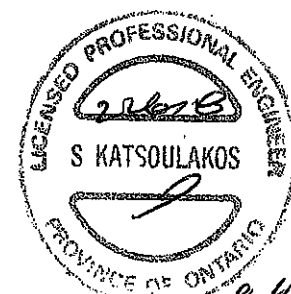
Resistance Factor phi has been applied to all presented results per CSA O86.

BCALC@ analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

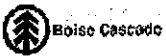
CONFORMS TO OBC 2012

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



DWG NO. TAM 1236218
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement...\B1C(i2013)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:31

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B1C(i20

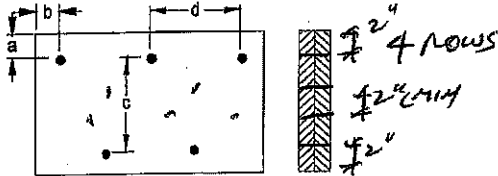
Specifier:

Designer:

Company:

Misc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 6"

Calculated Side Load = 846.7 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

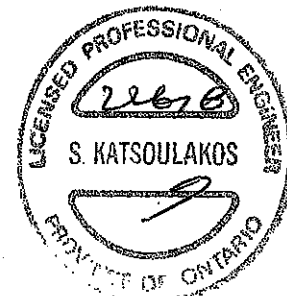
Connectors are: 16d Nails

3-1/2" ARDOX SPIRAL

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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DWG NO. TAM 10367-07
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\...\B1B(i2122)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:31

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

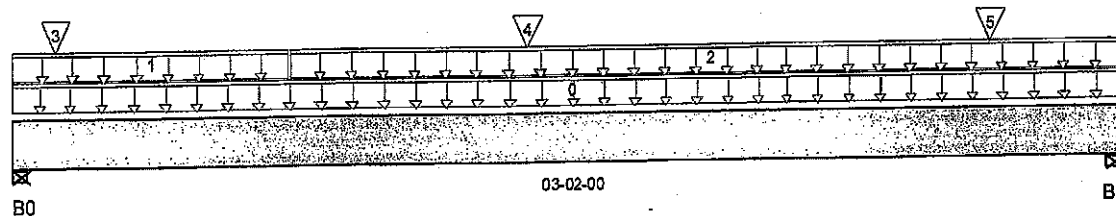
Description: Designs\Flush Beams\Basement\Flush Beams\B1B(i2122)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 03-02-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4"	856 / 0	511 / 0		
B1, 4"	795 / 0	480 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	E23(i911)	Unf. Lin. (lb/ft)	L	00-00-00	03-02-00		40			n/a
1	E23(i911)	Unf. Lin. (lb/ft)	L	00-00-00	00-09-08	136	68			n/a
2	-	Unf. Lin. (lb/ft)	L	00-09-08	03-02-00	150	75			n/a
3	J6(i2112)	Conc. Pt. (lbs)	L	00-01-08	00-01-08	386	193			n/a
4	J6(i2148)	Conc. Pt. (lbs)	L	01-05-08	01-05-08	400	200			n/a
5	J6(i2142)	Conc. Pt. (lbs)	L	02-09-08	02-09-08	385	192			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	928 ft-lbs	38,727 ft-lbs	2.4%	1	01-05-08
End Shear	906 lbs	14,464 lbs	6.3%	1	01-03-14
Total Load Defl.	L/999 (0.001")	n/a	n/a	4	01-06-15
Live Load Defl.	L/999 (0")	n/a	n/a	5	01-06-15
Max Defl.	0.001"	n/a	n/a	4	01-06-15
Span / Depth	2.7	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	4" x 3-1/2"	1,922 lbs	32.1%	11.3%	Unspecified
B1 Wall/Plate	4" x 3-1/2"	1,792 lbs	30%	10.5%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA

O86. CONFORMS TO OBC 2012

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



DWG NO. TAM 10368
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement...B1B(i2122)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:31

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B1B(i21

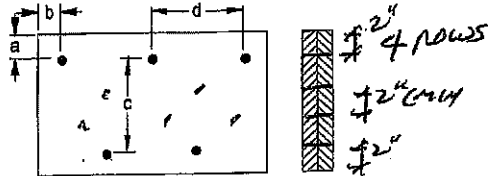
Specifier:

Designer:

Company:

Misc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 6"

Calculated Side Load = 785.6 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 16d Nails

3-1/2" ARDOX SPIRAL

Disclosure

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DWG NO. TAM/13362.8
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basementl...B19(i2087)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:32

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

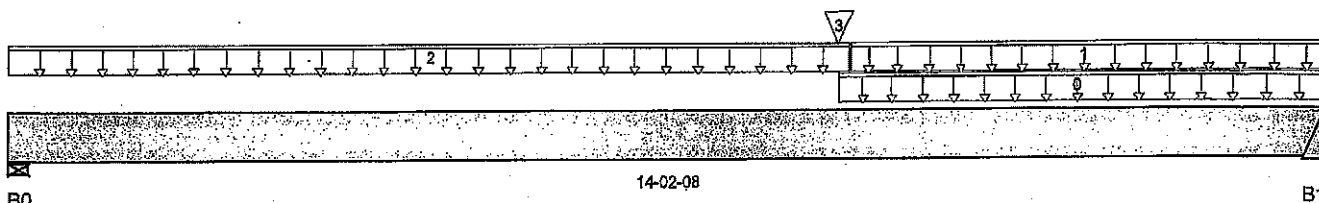
Description: Designs\Flush Beams\Basement\Flush Beams\B19(i2087

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 14-02-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4-3/8"	619 / 0	407 / 0		
B1	596 / 0	401 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	User Load	Unf. Lin. (lb/ft)	L	08-11-06	14-02-08	40	20			n/a
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	09-01-02	14-02-08	6	3			n/a
2	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	09-01-02	80	40			n/a
3	B21(i2115)	Conc. Pt. (lbs)	L	08-11-06	08-11-06	345	202			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	5,634 ft-lbs	38,727 ft-lbs	14.5%	1	08-09-15
End Shear	1,355 lbs	14,464 lbs	9.4%	1	01-04-04
Total Load Defl.	L/1,227 (0.135")	0.69"	19.6%	4	07-03-07
Live Load Defl.	L/999 (0.082")	n/a	n/a	5	07-03-07
Max Defl.	0.135"	n/a	n/a	4	07-03-07
Span / Depth	13.9	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	4-3/8" x 3-1/2"	1,437 lbs	22%	7.7%	Unspecified
B1 Hanger	2" x 3-1/2"	1,396 lbs	n/a	16.3%	Hanger

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

CONFORMS TO OBC 2012

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



DWG NO. TAM 10769
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basment\...\B19(i2087)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:32

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\Basment\Flush Beams\B19(i20

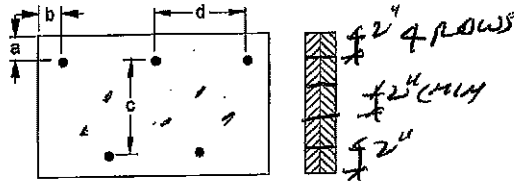
Specifier:

Designer:

Company:

Misc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 6"

Calculated Side Load = 54.2 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: Nails

3-1/2" ARDOX SPIRAL

Disclosure

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Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement... \B20(i2092)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:32

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

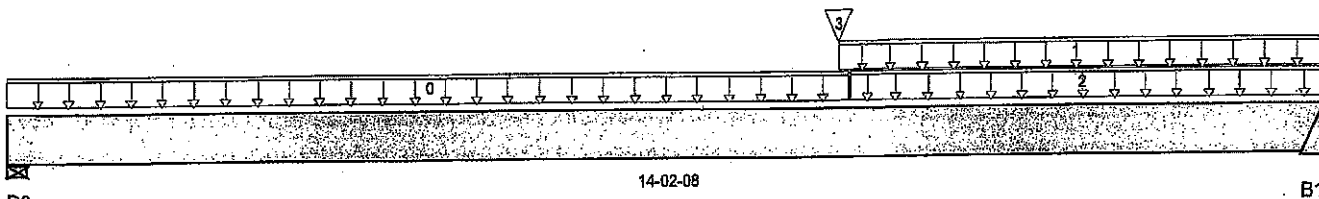
Description: Designs\Flush Beams\Basement\Flush Beams\B20(i2092

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 14-02-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4-3/8"	544 / 0	370 / 0		
B1	697 / 0	451 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	09-01-02	53	27			n/a
1	User Load	Unf. Lin. (lb/ft)	L	08-11-06	14-02-08	40	20			n/a
2	FC2 Floor Material	Unf. Lin. (lb/ft)	L	09-01-02	14-02-08	34	17			n/a
3	B21(i2115)	Conc. Pt. (lbs)	L	08-11-06	08-11-06	374	217			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	5,927 ft-lbs	38,727 ft-lbs	15.3%	1	08-11-06
End Shear	1,411 lbs	14,464 lbs	9.8%	1	13-00-10
Total Load Defl.	L/1,205 (0.137")	0.69"	19.9%	4	07-04-14
Live Load Defl.	L/999 (0.083")	n/a	n/a	5	07-04-14
Max Defl.	0.137"	n/a	n/a	4	07-04-14
Span / Depth	13.9	n/a	n/a		00-00-00

Bearing Supports

Beaming Supports						
B0	Wall/Plate	4-3/8" x 3-1/2"	1,279 lbs	19.6%	6.8%	Unspecified
B1	Hanger	2" x 3-1/2"	1,609 lbs	n/a	18.8%	Hanger

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

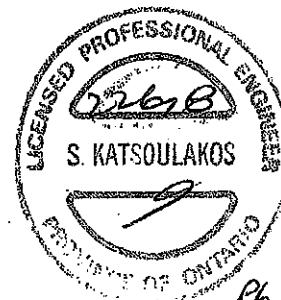
Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012



DWG NO. TAM 10370-18
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement...B20(i2092)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:32

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\Basement\Flush Beams\B20(i20

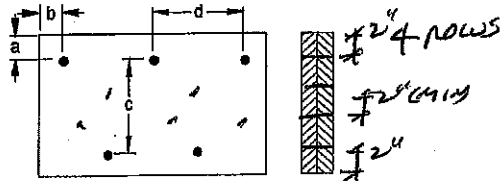
Specifier:

Designer:

Company:

Msc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 6"

Calculated Side Load = 58.6 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 3-1/4" x 11-7/8" QN Nails

3-1/2" ARDOX SPIRAL

Disclosure

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OWG NO. TAM 103708
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basement\...\B21(i2115)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:32

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

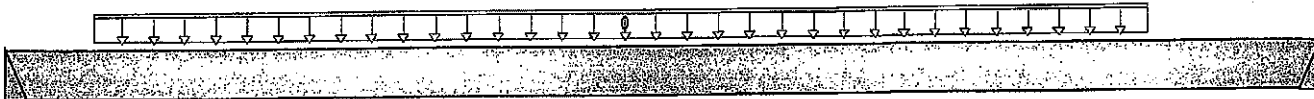
Description: Designs\Flush Beams\Basement\Flush Beams\B21(i2115

Specifier:

Designer:

Company:

Misc:



04-11-08

B0

B1

Total Horizontal Product Length = 04-11-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	375 / 0	217 / 0		
B1	344 / 0	201 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0 Smoothed Load	Unf. Lin. (lb/ft)	L	00-03-14	04-03-14	163	82			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,175 ft-lbs	38,727 ft-lbs	3%	1	02-03-14
End Shear	750 lbs	14,464 lbs	5.2%	1	03-09-10
Total Load Defl.	L/999 (0.003")	n/a	n/a	4	02-05-14
Live Load Defl.	L/999 (0.002")	n/a	n/a	5	02-05-14
Max Defl.	0.003"	n/a	n/a	4	02-05-14
Span / Depth	4.8	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 3-1/2"	834 lbs	n/a	9.8%	Hanger
B1 Hanger	2" x 3-1/2"	768 lbs	n/a	9%	Hanger

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

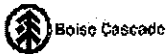
Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012



P614

DWG NO. TAM 10371-8
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basment\...\B21(i2115)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:32

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\Basment\Flush Beams\B21(i21

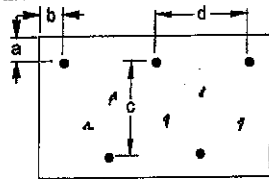
Specifier:

Designer:

Company:

Msc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 12"

Calculated Side Load = 308.0 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

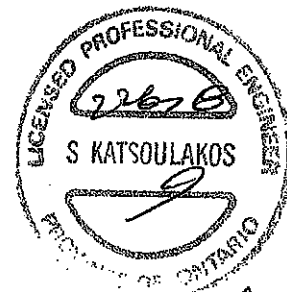
Connectors are: 16d Box Nails

3-1/2" ARDOX SPIRAL

Disclosure

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DWG NO. TAM/0371-18
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B24(12165)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:32

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

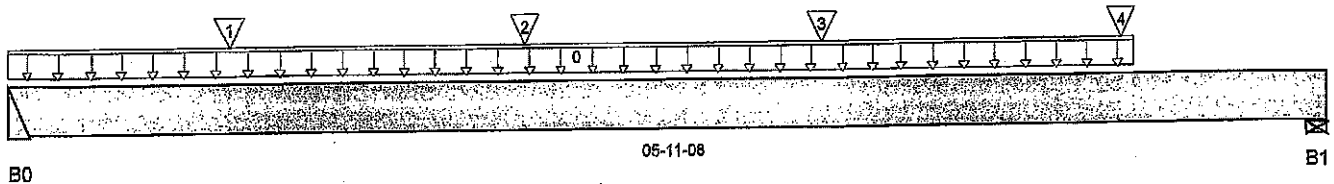
Description: Designs\Flush Beams\1st Floor\Flush Beams\B24(12165)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 05-11-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	477 / 0	472 / 0		
B1, 2-3/4"	593 / 0	637 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	User Load	Unf. Lin. (lb/ft)	L	00-00-00	05-01-04		60			n/a
1	J4(1032)	Conc. Pt. (lbs)	L	00-11-14	00-11-14	224	112			n/a
2	J4(1035)	Conc. Pt. (lbs)	L	02-03-14	02-03-14	242	121			n/a
3	J4(1041)	Conc. Pt. (lbs)	L	03-07-14	03-07-14	238	119			n/a
4	-	Conc. Pt. (lbs)	L	05-00-08	05-00-08	358	366			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,080 ft-lbs	38,727 ft-lbs	5.4%	1	03-05-14
End Shear	1,362 lbs	14,464 lbs	9.4%	1	04-08-14
Total Load Defl.	L/999 (0.009")	n/a	n/a	4	02-11-14
Live Load Defl.	L/999 (0.005")	n/a	n/a	5	02-11-14
Max Defl.	0.009"	n/a	n/a	4	02-11-14
Span / Depth	5.7	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 3-1/2"	1,305 lbs	n/a	15.3%	Hanger
B1 Wall/Plate	2-3/4" x 3-1/2"	1,685 lbs	41%	14.4%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

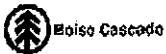
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9



DWG NO. TAM/037248
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...B24(i2165)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:32

BC CALCO® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B24(i2165

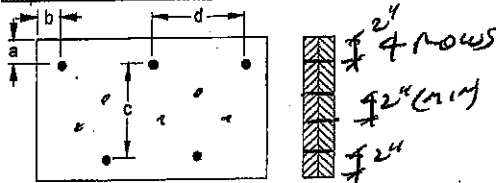
Specifier:

Designer:

Company:

Msc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 2"

Calculated Side Load = 347.1 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 16d ~~5/16"~~ Nails

3-1/2" ARDOX SPIRAL

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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DWG NO. TAM/1037/102
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor... \B25(i2166)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:33

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

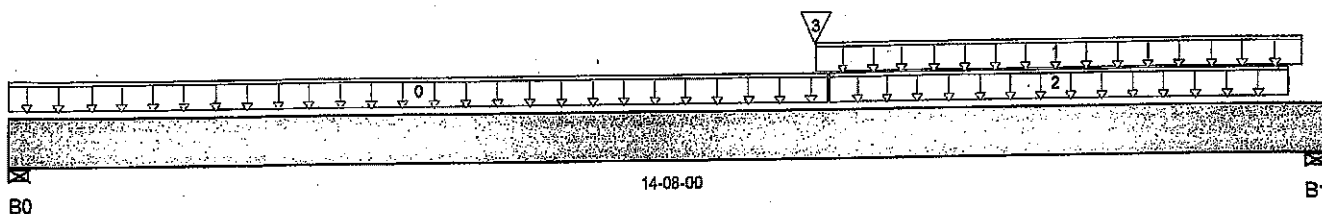
Description: Designs\Flush Beams\1st Floor\Flush Beams\B25(i2166)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 14-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4-3/8"	498 / 0	489 / 0		
B1, 5-1/2"	532 / 0	771 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	09-01-02	47	23			n/a
1	User Load	Unf. Lin. (lb/ft)	L	08-11-06	14-05-02		60			n/a
2	FC3 Floor Material	Unf. Lin. (lb/ft)	L	09-01-02	14-03-06	27	13			n/a
3	B24(i2165)	Conc. Pt. (lbs)	L	08-11-06	08-11-06	465	463			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	7,178 ft-lbs	38,727 ft-lbs	18.5%	1	08-11-06
End Shear	1,585 lbs	14,464 lbs	11%	1	13-02-10
Total Load Defl.	L/999 (0.168")	0.698"	24%	4	07-06-04
Live Load Defl.	L/999 (0.079")	n/a	n/a	5	07-06-04
Max Defl.	0.168"	n/a	n/a	4	07-06-04
Span / Depth	14.1	n/a	n/a		00-00-00

Bearing Supports

Seaming Support						
B0	Wall/Plate	4-3/8" x 3-1/2"	1,359 lbs	20.8%	7.3%	Unspecified
B1	Wall/Plate	5-1/2" x 3-1/2"	1,762 lbs	21.4%	7.5%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



DWG NO. TAM / 10373-8
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...B25(I2166)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:33

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B25(I2166)

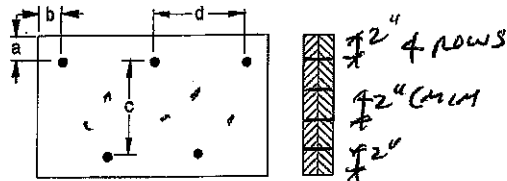
Specifier:

Designer:

Company:

Misc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 4"

Calculated Side Load = 87.0 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 3-1/4" Nails

3-1/2" ARDOX SPIRAL

Disclosure

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DWG NO. TAM 15373-8
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B26(i2164)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:33

BC CALC@ Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

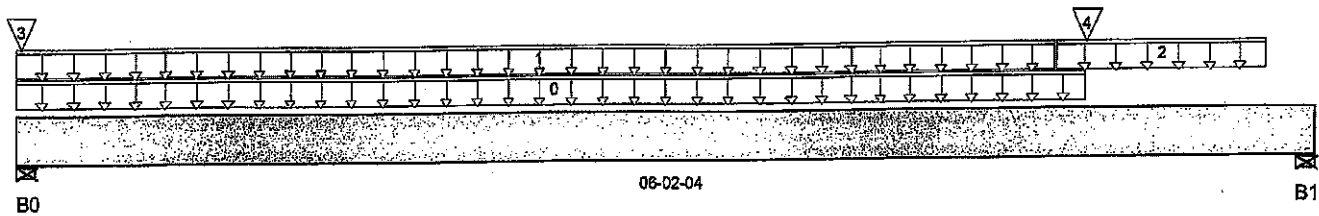
Description: Designs\Flush Beams\1st Floor\Flush Beams\B26(i2164)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 06-02-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-3/8"	64 / 0	275 / 0		
B1, 5-1/2"	122 / 0	386 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.85	Snow 1.00	Wind 1.15	Trib.
0	User Load	Unf. Lin. (lb/ft)	L	00-00-00	05-01-04		60			n/a
1	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	04-11-08	16	8			n/a
2	FC3 Floor Material	Unf. Lin. (lb/ft)	L	04-11-08	05-11-08	14	7			n/a
3	FC3 Floor Material	Conc. Pt. (lbs)	L	00-00-04	00-00-04	2				n/a
4	B27(i2167)	Conc. Pt. (lbs)	L	05-01-04	05-01-04	89	232			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	518 ft-lbs	25,173 ft-lbs	2.1%	0	03-04-12
End Shear	393 lbs	9,401 lbs	4.2%	0	04-08-14
Total Load Defl.	L/999 (0.003")	n/a	n/a	4	03-02-05
Live Load Defl.	L/999 (0.001")	n/a	n/a	5	03-02-05
Max Defl.	0.003"	n/a	n/a	4	03-02-05
Span / Depth	5.5	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	5-3/8" x 3-1/2"	386 lbs	7.4%	2.6%	Unspecified
B1 Wall/Plate	5-1/2" x 3-1/2"	540 lbs	10.1%	3.5%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC@ analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012



DWG NO. TAM / 0374.18
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor... \B26(I2164)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:33

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs \Flush Beams\1st Floor\Flush Beams\B26(I2164)

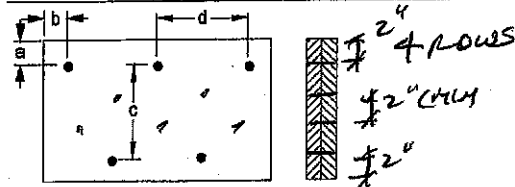
Specifier:

Designer:

Company:

Misc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 4"

Calculated Side Load = 68.4 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 3-1/2" ARDOX SPIRAL Nails

3-1/2" ARDOX SPIRAL

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current installation guide and applicable building codes. To obtain installation guide or ask questions, please call 1-800-964-6999 before installation.

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DWG NO. TAM/0374-08
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...B27(i2167)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:33

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

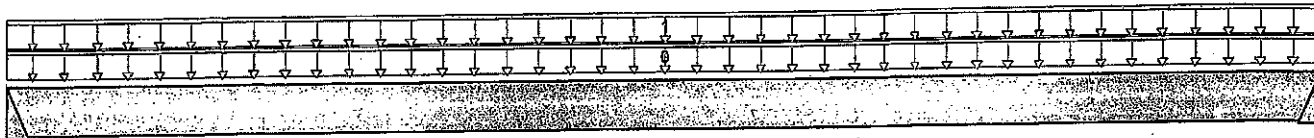
Description: Designs\Flush Beams\1st Floor\Flush Beams\B27(i2167)

Specifier:

Designer:

Company:

Misc:



05-02-04

B0

B1

Total Horizontal Product Length = 05-02-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	89 / 0	231 / 0		
B1	89 / 0	232 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	User Load	Unf. Lin. (lb/ft)	L	00-00-00	05-02-04		60			n/a
1	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	05-02-04	34	17			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	387 ft-lbs	25,173 ft-lbs	1.5%	0	02-07-02
End Shear	203 lbs	9,401 lbs	2.2%	0	01-01-14
Total Load Defl.	L/999 (0.002")	n/a	n/a	4	02-07-02
Live Load Defl.	L/999 (0")	n/a	n/a	5	02-07-02
Max Defl.	0.002"	n/a	n/a	4	02-07-02
Span / Depth	5	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0	Hanger 2" x 3-1/2"	423 lbs	n/a	5.8%	Hanger
B1	Hanger 2" x 3-1/2"	424 lbs	n/a	5.8%	Hanger

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

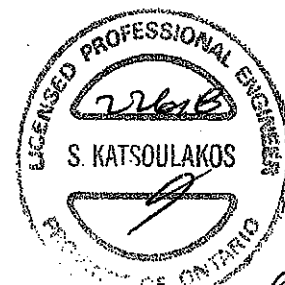
Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

CONFORMS TO OBC 2012

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



DWG NO. TAM 10375.118
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...B27(I2167)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:33

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B27(I2167)

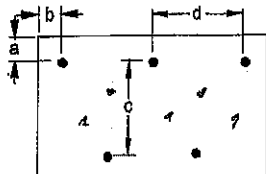
Specifier:

Designer:

Company:

Misc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = B"

Member has no side loads.

Connectors are: 16d Nails

3-1/2" ARDOX SPIRAL

Disclosure

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DWG NO. TAM/0375-18
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B28(i2071)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:34

BC CALCO Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

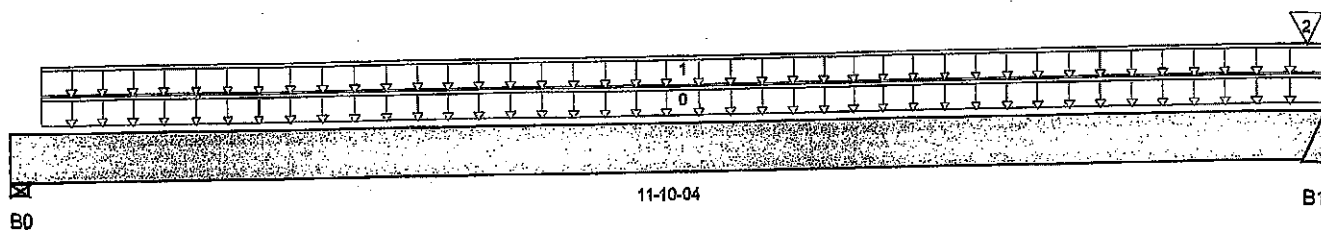
Description: Designs\Flush Beams\1st Floor\Flush Beams\B28(i2071)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 11-10-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	124 / 0	477 / 0		
B1	169 / 0	801 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	User Load	Unf. Lin. (lb/ft)	L	00-03-08	11-10-04		60			n/a
1	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-03-08	11-10-04	22	11			n/a
2	B32(i2073)	Conc. Pt. (lbs)	L	11-08-08	11-08-08	42	316			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,934 ft-lbs	25,173 ft-lbs	7.7%	0	05-11-14
End Shear	548 lbs	9,401 lbs	5.8%	0	01-03-08
Total Load Defl.	L/999 (0.043")	n/a	n/a	4	05-11-14
Live Load Defl.	L/999 (0.009")	n/a	n/a	5	05-11-14
Max Defl.	0.043"	n/a	n/a	4	05-11-14
Span / Depth	11.6	n/a	n/a		00-00-00

Bearing Supports

Bearing Supports						
B0	Wall/Plate	3-1/2" x 3-1/2"	668 lbs	19.6%	6.9%	Unspecified
B1	Hanger	2" x 3-1/2"	1,254 lbs	n/a	20.2%	Hanger

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

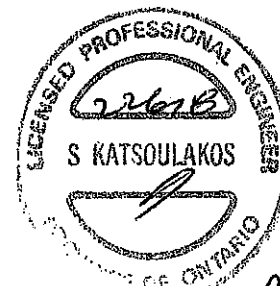
Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALCO analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

CONFORMS TO OBC 2012



DWG NO. TAM 10376
STRUCTURAL
COMPONENT ONLY



Boise Cascade

Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B28(i2071)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:34

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B28(i2071)

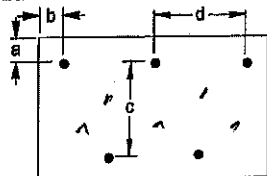
Specifier:

Designer:

Company:

Misc:

Connection Diagram



$\#2 \times 4$ posts
 $\#2 \times 4$ (M14)
 $\#2 \times 4$

a minimum = 2" c = 7-7/8"
 b minimum = 3" d = 6"

Calculated Side Load = 38.6 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

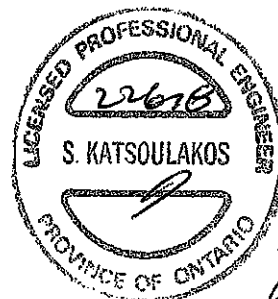
Connectors are: 3-1/4" ARDOX SPIRAL Nails

3-1/2" ARDOX SPIRAL

Disclosure

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DWG NO. TAM/03768
 STRUCTURAL
 COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...B30(i2034)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:34

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

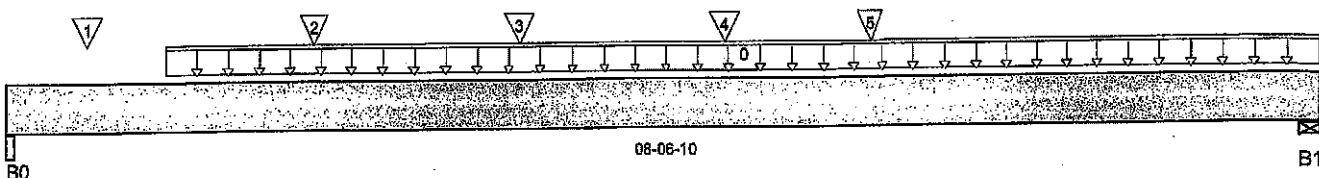
Description: Designs\Flush Beams\1st Floor\Flush Beams\B30(i2034)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 08-06-10

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 1-3/4"	2,066 / 0	1,111 / 0		
B1, 4"	2,018 / 0	1,117 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
0	Smoothed Load	Unf. Lin. (lb/ft)	L	01-00-06	08-06-10	316	158			n/a
1		Conc. Pt. (lbs)	L	00-06-02	00-06-02	493	247			n/a
2	J3(i1668)	Conc. Pt. (lbs)	L	02-00-00	02-00-00	319	160			n/a
3	J3(i1668)	Conc. Pt. (lbs)	L	03-04-00	03-04-00	319	160			n/a
4	J3(i1767)	Conc. Pt. (lbs)	L	04-08-00	04-08-00	287	144			n/a
5	B31(i2049)	Conc. Pt. (lbs)	L	05-07-06	05-07-06	278	219			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	9,384 ft-lbs	38,727 ft-lbs	24.2%	1	04-04-06
End Shear	3,812 lbs	14,464 lbs	26.4%	1	01-01-10
Total Load Defl.	L/999 (0.081")	n/a	n/a	4	04-01-04
Live Load Defl.	L/999 (0.052")	n/a	n/a	5	04-01-04
Max Defl.	0.081"	n/a	n/a	4	04-01-04
Span / Depth	8.3	n/a	n/a		00-00-00

Bearing Supports	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Beam	1-3/4" x 3-1/2"	4,488 lbs	84%	60.1%	Unspecified
B1 Wall/Plate	4" x 3-1/2"	4,422 lbs	73.9%	25.9%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

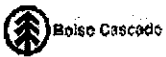
Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012



DWG NO. TAM 10377-18
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor... \B30(i2034)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:34

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs \Flush Beams \1st Floor \Flush Beams \B30(i2034)

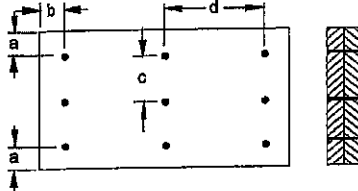
Specifier:

Designer:

Company:

Misc:

Connection Diagram



a minimum = 2" c = 3-15/16"
b minimum = 3" d = 6"

Calculated Side Load = 652.8 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 16d Nails

3-1/2" ARDOX SPIRAL

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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DWG NO. TAM/10372/18
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...B31(i2049)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:34

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

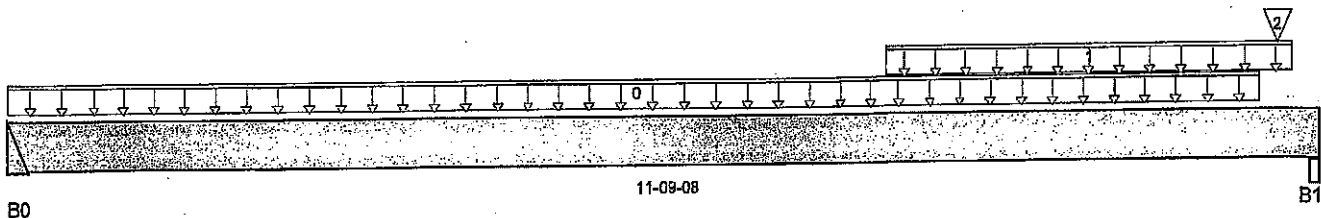
Description: Designs\Flush Beams\1st Floor\Flush Beams\B31(i2049)

Specifier:

Designer:

Company:

Misc:



Total Horizontal Product Length = 11-09-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	277 / 0	216 / 0		
B1, 2-1/4"	893 / 0	806 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	11-03-04	22	11			n/a
1	User Load	Unf. Lin. (lb/ft)	L	07-10-12	11-06-12	240	120			n/a
2	B32(i2073)	Conc. Pt. (lbs)	L	11-05-00	11-05-00	44	317			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	3,455 ft-lbs	38,727 ft-lbs	8.9%	1	08-02-13
End Shear	1,955 lbs	14,464 lbs	13.5%	1	10-07-06
Total Load Defl.	L/999 (0.055")	n/a	n/a	4	06-05-01
Live Load Defl.	L/999 (0.033")	n/a	n/a	5	06-05-01
Max Defl.	0.055"	n/a	n/a	4	06-05-01
Span / Depth	11.7	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 3-1/2"	685 lbs	n/a	8%	Hanger
B1 Beam	2-1/4" x 3-1/2"	2,348 lbs	69.8%	24.4%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

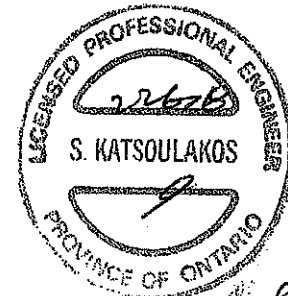
Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012



DWG NO. TAM/0378/08
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...B31(i2049)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:34

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B31(i20

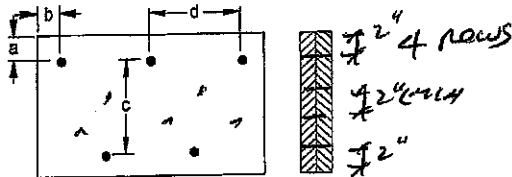
Specifier:

Designer:

Company:

Misc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 6"

Calculated Side Load = 39.2 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 3-1/2" ARDOX SPIRAL Nails

3-1/2" ARDOX SPIRAL

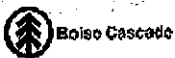
Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current installation guide and applicable building codes. To obtain installation guide or ask questions, please call 1-800-964-6999 before installation.

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DWG NO. TAM/037B.8
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B32(i2073)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:35

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

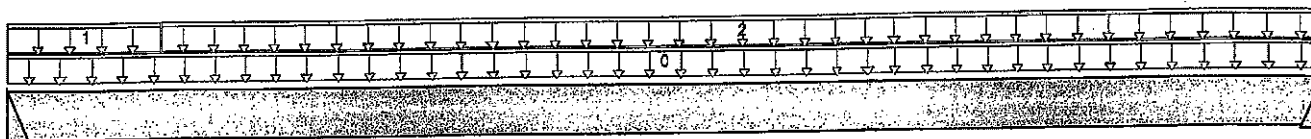
Description: Designs\Flush Beams\1st Floor\Flush Beams\B32(i2073)

Specifier:

Designer:

Company:

Misc:



08-02-04

B0

B1

Total Horizontal Product Length = 08-02-04

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0	44 / 0	317 / 0		
B1	42 / 0	316 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.85	Snow 1.00	Wind 1.15	Trib.
0	User Load	Unf. Lin. (lb/ft)	L	00-00-00	08-02-04		60			n/a
1	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	00-11-06	12	6			n/a
2	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-11-06	08-02-04	10	5			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	861 ft-lbs	25,173 ft-lbs	3.4%	0	04-00-14
End Shear	326 lbs	9,401 lbs	3.5%	0	01-01-14
Total Load Defl.	L/999 (0.008")	n/a	n/a	4	04-00-14
Live Load Defl.	L/999 (0.001")	n/a	n/a	5	04-00-14
Max Defl.	0.008"	n/a	n/a	4	04-00-14
Span / Depth	8.1	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Hanger	2" x 3-1/2"	462 lbs	n/a	8%	Hanger
B1 Hanger	2" x 3-1/2"	459 lbs	n/a	8%	Hanger

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

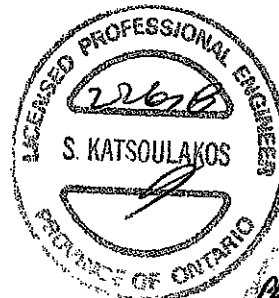
Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

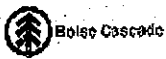
CONFORMS TO OBC 2012

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



DWG NO. TAM/03798
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...B32(I2073)

Dry | 1 span | No cantilevers | 0/12 slope(deg)

December 15, 2017 12:11:35

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B32(I2073)

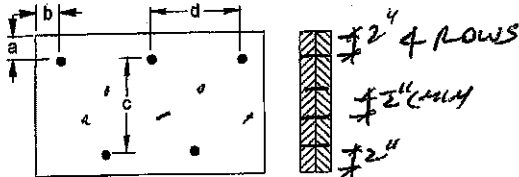
Specifier:

Designer:

Company:

Misc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 4"

Member has no side loads.

Connectors are: 16d Sinker Nails

3-1/2" ARDOX SPIRAL

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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OWG NO. TAM 103798
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B35(I2106)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:35

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

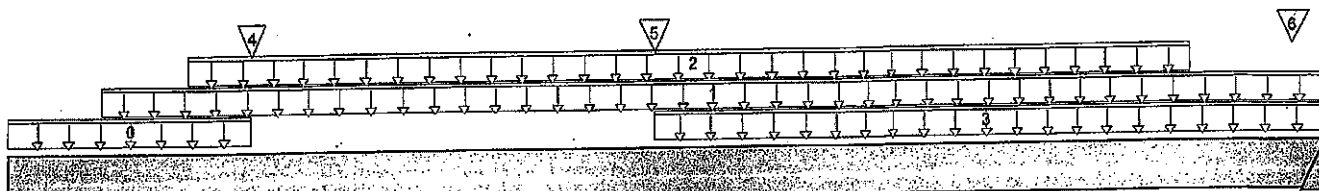
Description: Designs\Flush Beams\1st Floor\Flush Beams\B35(I2106)

Specifier:

Designer:

Company:

Misc:



B0
B1

Total Horizontal Product Length = 06-06-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 5-1/2"	1,689 / 0	1,468 / 0	1,336 / 0	
B1	1,773 / 0	1,458 / 0	1,033 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trlb.
0	User Load	Unf. Lin. (lb/ft)	L	00-00-00	01-02-08	145	132	277		n/a
1	User Load	Unf. Lin. (lb/ft)	L	00-05-08	06-06-08		100			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	00-10-12	05-10-12	390	194			n/a
3	User Load	Unf. Lin. (lb/ft)	L	03-02-08	06-06-08	145	132	277		n/a
4	User Load	Conc. Pt. (lbs)	L	01-02-08	01-02-08	291	264	555		n/a
5	User Load	Conc. Pt. (lbs)	L	03-02-08	03-02-08	291	264	555		n/a
6	J6(I1954)	Conc. Pt. (lbs)	L	06-04-12	06-04-12	266	133			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	7,757 ft-lbs	38,727 ft-lbs	20%	1	03-04-12
End Shear	4,343 lbs	14,464 lbs	30%	1	01-05-06
Total Load Defl.	L/999 (0.038")	n/a	n/a	35	03-04-12
Live Load Defl.	L/999 (0.023")	n/a	n/a	51	03-04-12
Max Defl.	0.038"	n/a	n/a	35	03-04-12
Span / Depth	6.1	n/a	n/a		00-00-00

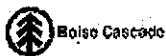
Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0	Wall/Plate 5-1/2" x 3-1/2"	5,036 lbs	61.2%	21.4%	Unspecified
B1	Hanger 2" x 3-1/2"	4,999 lbs	n/a	58.5%	Hanger

Notes



DWG NO. TAM 103808
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor\...\B35(i2106)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:35

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Flush Beams\1st Floor\Flush Beams\B35(i2106)

Specifier:

Designer:

Company:

Misc:

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

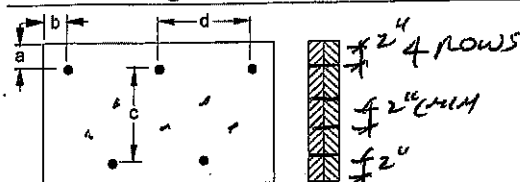
CONFORMS TO OBC 2012

Unbalanced snow loads determined from building geometry were used in selected products verification.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 4"

Calculated Side Load = 719.0 lb/ft

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Connectors are: 16d Sinker Nails

3-1/2" ARDOX SPIRAL

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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DWG NO. TAM 10380-18
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...B29 DR(i2004)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:35

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports:

CCMC 12472-R

File Name: GEORGIAN 3.mmdl

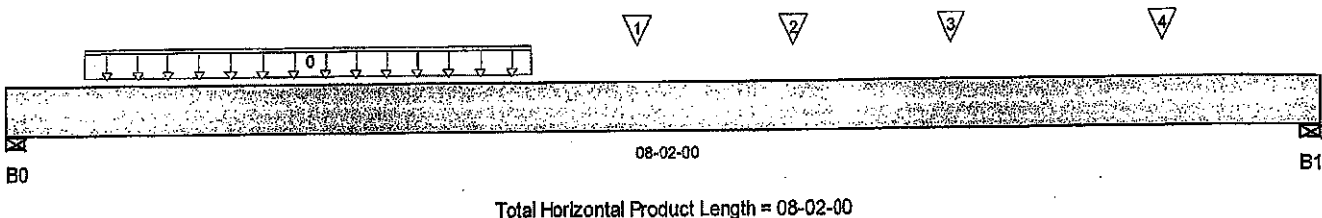
Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B29

Specifier:

Designer:

Company:

Misc:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 4"	2,158 / 0	1,167 / 0		
B1, 4"	2,090 / 0	1,131 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
0 Smoothed Load	Unf. Lin. (lb/ft)	L	00-05-12	03-03-01	307	153			n/a
1 -	Conc. Pt. (lbs)	L	03-10-13	03-10-13	2,326	1,239			n/a
2 J2(i1523)	Conc. Pt. (lbs)	L	04-10-08	04-10-08	283	141			n/a
3 J2(i1039)	Conc. Pt. (lbs)	L	05-10-08	05-10-08	330	165			n/a
4 J2(i1040)	Conc. Pt. (lbs)	L	07-02-08	07-02-08	377	189			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	13,157 ft-lbs	38,727 ft-lbs	34%	1	03-10-14
End Shear	4,397 lbs	14,464 lbs	30.4%	1	01-03-14
Total Load Defl.	L/999 (0.087")	n/a	n/a	4	04-00-10
Live Load Defl.	L/999 (0.056")	n/a	n/a	5	04-00-10
Max Defl.	0.087"	n/a	n/a	4	04-00-10
Span / Depth	7.7	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	4" x 3-1/2"	4,695 lbs	51.6%	27.5%	Unspecified
B1 Wall/Plate	4" x 3-1/2"	4,550 lbs	50%	26.6%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume unbraced length of Top: 00-02-15, Bottom: 00-02-15.

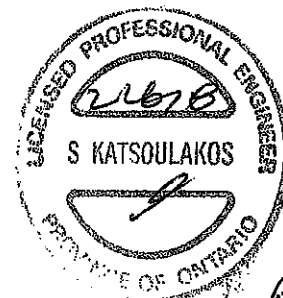
Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

CONFORMS TO OBC 2012

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



DWG NO. TAM 1038/19
STRUCTURAL
COMPONENT ONLY



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1st Floor...B29 DR(i2004)

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 12:11:35

BC CALC® Design Report



Build 5033

Job Name:

Address:

City, Province, Postal Code: OAKVILLE,

Customer:

Code reports: CCMC 12472-R

File Name: GEORGIAN 3.mmdl

Description: Designs\Dropped Beams\1st Floor\Dropped Beams\B2

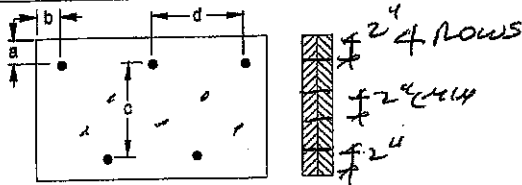
Specifier:

Designer:

Company:

Misc:

Connection Diagram



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 4"

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Member has no side loads.

Connectors are: 16d Sinker Nails

3-1/2" ARDOX SPIRAL

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

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