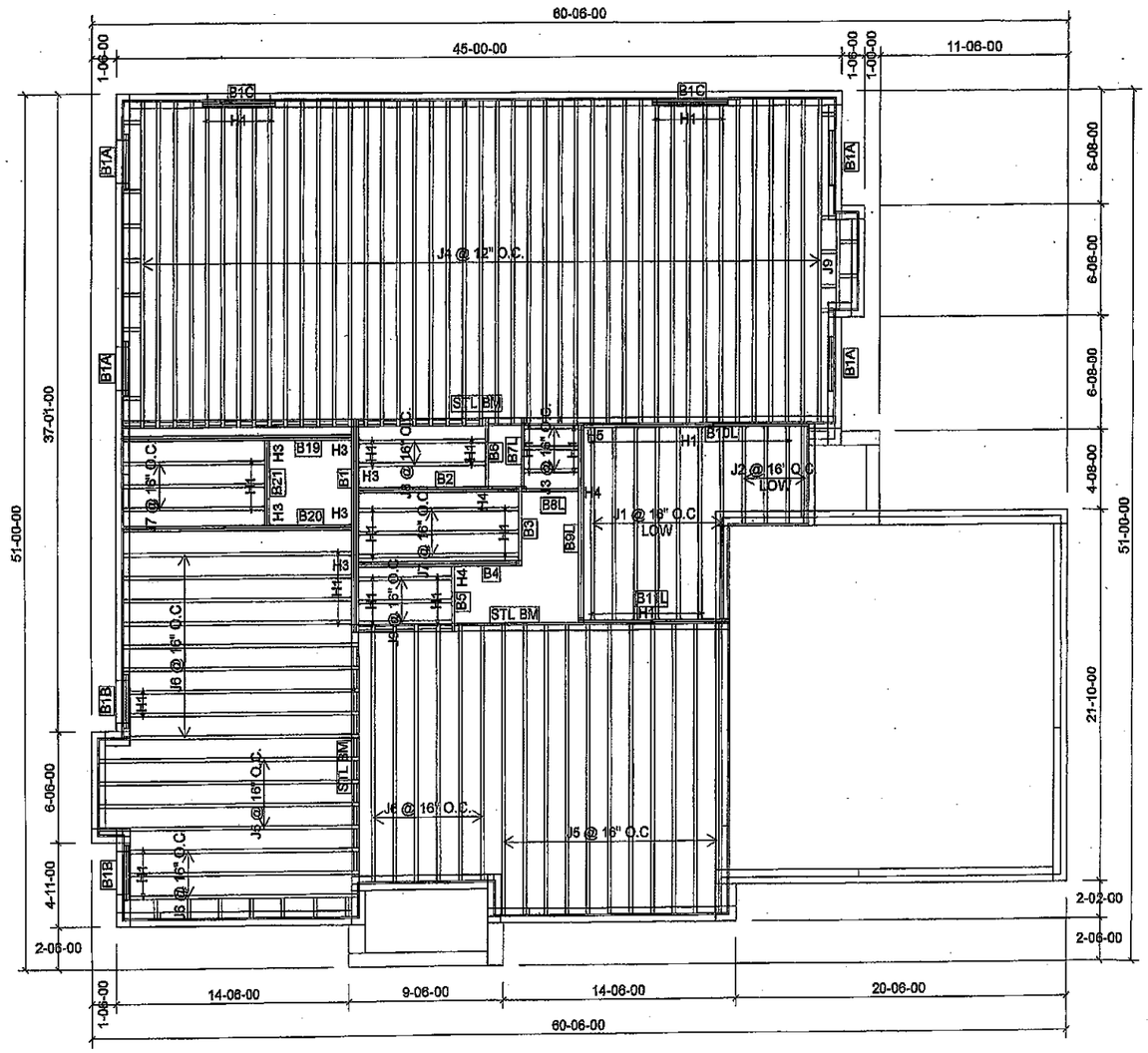


Products				
PlotID	Length	Product	Plies	Net Qty
J1	12-00-00	9 1/2" NI-40x	1	7
J2	6-00-00	9 1/2" NI-40x	1	4
J3	4-00-00	9 1/2" NI-40x	1	3
J4	20-00-00	11 7/8" NI-40x	1	43
J5	18-00-00	11 7/8" NI-40x	1	15
J6	16-00-00	11 7/8" NI-40x	1	18
J7	10-00-00	11 7/8" NI-40x	1	6
J8	8-00-00	11 7/8" NI-40x	1	2
J9	6-00-00	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 26/19

SITE COPY

TAMARACK LUMBER INC
ALPA LUMBER GROUP

FROM PLAN DATED: NOV-2017

BUILDER: GREENYORK HOMES

SITE: TIBURTINO

MODEL: GEORGIAN 3

ELEVATION: B

LOT: 7

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.

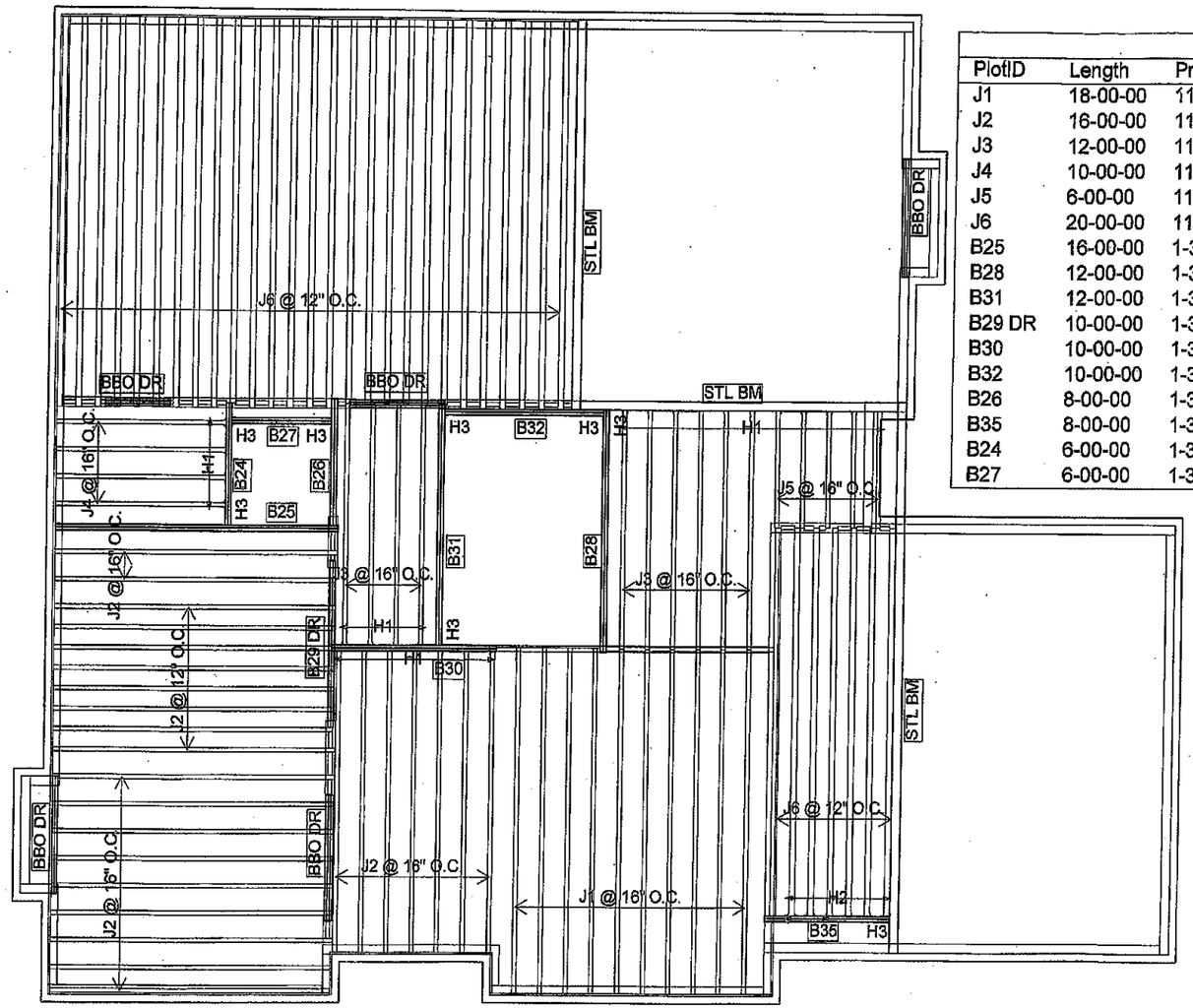
LOADING:
DESIGN LOADS: L/480.000
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft
TILED AREAS: 20 lb/ft

SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 12/18/2017

1st FLOOR

19-0250



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

TAMARACK LUMBER INC
ALPA LUMBER GROUP

FROM PLAN DATED: NOV-2017

BUILDER: GREENYORK HOMES

SITE: TIBURTINO

MODEL: GEORGIAN 3

ELEVATION: B

LOT: 7

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 FIGURE 7 TABLES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS 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/ft²
TILED AREAS: 20 lb/ft²

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 12/18/2017

2nd FLOOR

NORDIC STRUCTURES	COMPANY J9 1ST FLOOR Dec. 15, 2017 15:45	PROJECT J6 2ND FLOOR J6 2ND FLOOR

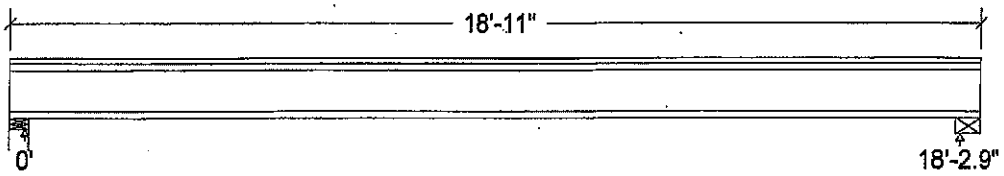
Design Check Calculation Sheet

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		-

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 Defl'n	Lmax = 18'-3 = 0.026	Lv = 20'-6 = 0.034	ft in	0.76

P6/L

DWG NO. TAM 10353-18
STRUCTURAL COMPONENT ONLY

19-0250

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:  EIeff =    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/0353-18
STRUCTURAL
COMPONENT ONLY

NORDIC STRUCTURES	COMPANY J9 1ST FLOOR Dec. 15, 2017 15:40	PROJECT J4 1ST FLOOR J4 1ST FLOOR

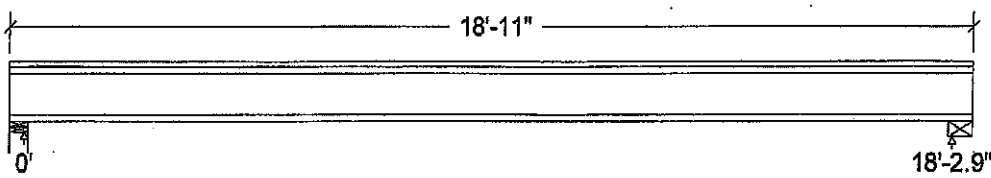
Design Check Calculation Sheet

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

p6/6

DWG NO. TAM 10354-18
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:  EIeff =    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.

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM/0354
STRUCTURAL COMPONENT ONLY

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

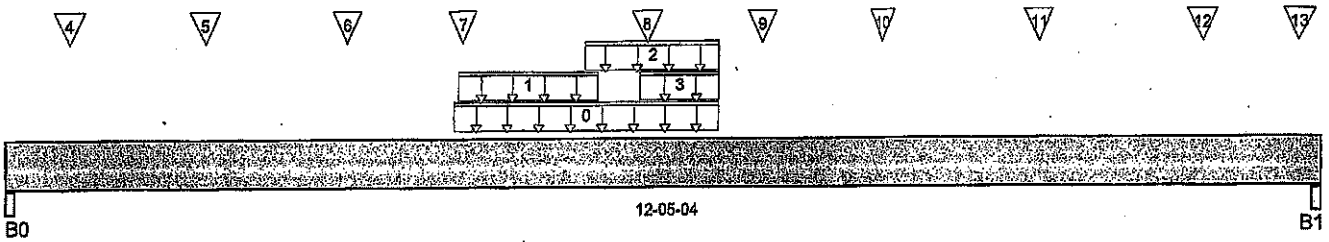
BC CALC® Design Report

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

December 15, 2017 12:11:26

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\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

LICENSED PROFESSIONAL ENGINEER
22618
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10355-18
STRUCTURAL COMPONENT ONLY

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

BC CALC® Design Report

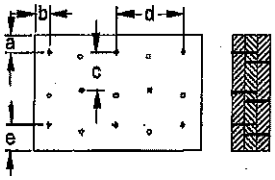
Dry | 1 span | No cantilevers | 0/12 slope (deg) December 15, 2017 12:11:26

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\B1(i204
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

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

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.

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10355.18
STRUCTURAL COMPONENT ONLY

Boise Cascade

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

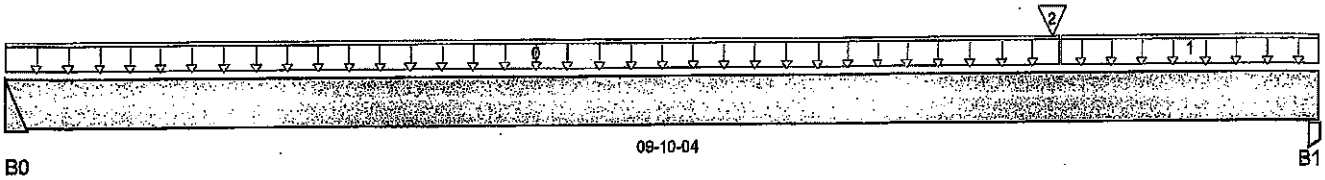
Dry | 1 span | No cantilevers | 0/12 slope (deg)

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\Basment\Flush Beams\B2(i2006)
Specifier:
Designer:
Company:
Misc:



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 103568
STRUCTURAL COMPONENT ONLY

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

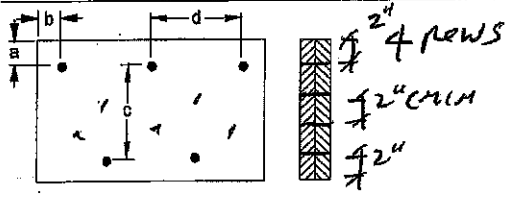
Dry | 1 span | No cantilevers | 0/12 slope (deg) December 15, 2017 12:11:28

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\Basment\Flush Beams\B2(i200
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

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.

LICENSED PROFESSIONAL ENGINEER
2618
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10356-8
STRUCTURAL
COMPONENT ONLY

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

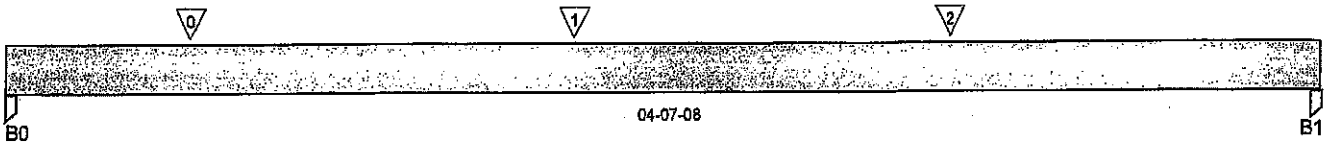
BC CALC® Design Report

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

December 15, 2017 12:11:28

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\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	Trib.
0	J7(i2036)	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

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

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.

DWG NO. TAM 10357-R
STRUCTURAL COMPONENT ONLY

Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basment\...\B4(i2143)

Boise Cascade

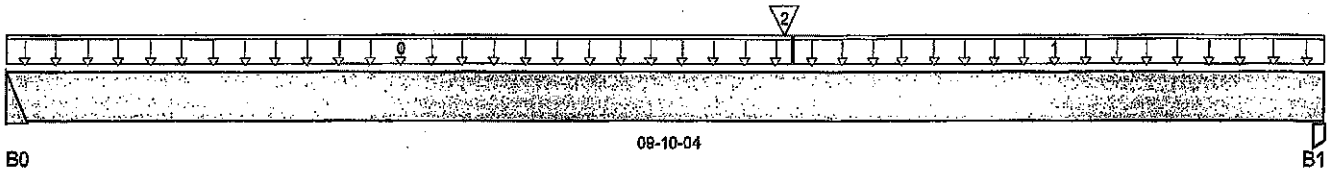
BG CALC® Design Report

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

December 15, 2017 12:11:29

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\B4(i2143)
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(i2090)	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 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

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10356
STRUCTURAL COMPONENT ONLY

Boise Cascade

Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basment\...\B4(i2143)

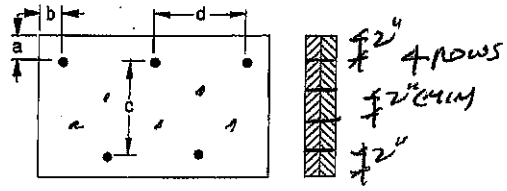
Dry | 1 span | No cantilevers | 0/12 slope (deg) December 15, 2017 12:11:29

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\Basment\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

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.

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10358-18
STRUCTURAL
COMPONENT ONLY

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

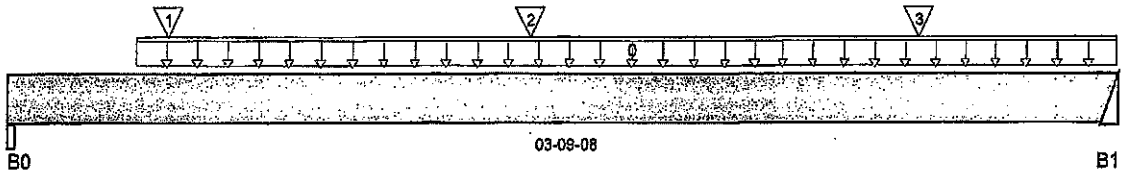
BC CALC® Design Report

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

December 15, 2017 12:11:29

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

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

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.

LICENSED PROFESSIONAL ENGINEER
2668
S KATSOULAKOS
ONTARIO

DWG NO. TAM 10359-16
STRUCTURAL COMPONENT ONLY

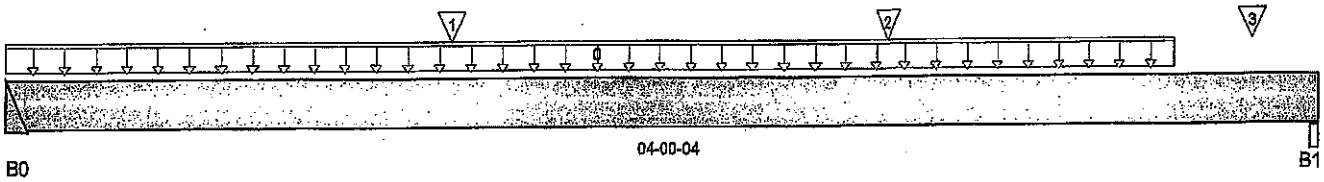
Boise Cascade Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basment\Flush Beams\B6(i2018)

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\Basment\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

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.

LICENSED PROFESSIONAL ENGINEER
2676
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10360-18
STRUCTURAL COMPONENTS ONLY

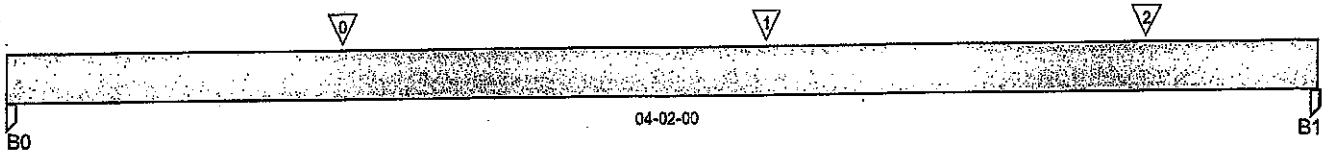
Boise Cascade Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basment\Flush Beams\B7L(i861)

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\Basment\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

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

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.

LICENSED PROFESSIONAL ENGINEER
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM-10361-S
STRUCTURAL COMPONENT ONLY

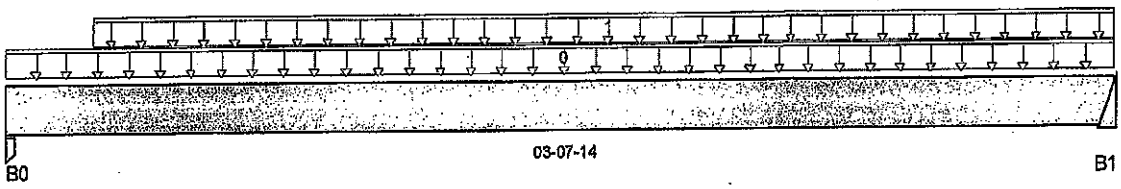
Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basment\...\B8L(i2190)

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\Basment\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 0.65	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

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

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.

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
ONTARIO

DWG NO. TAM/0362-R0
STRUCTURAL COMPONENT ONLY

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

Boise Cascade

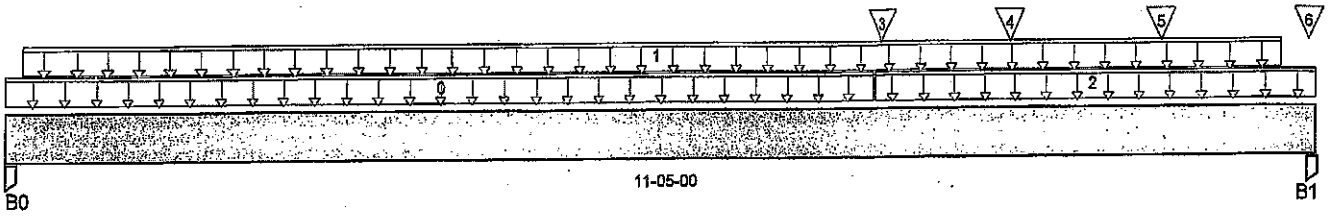
BC CALC® Design Report

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

December 15, 2017 12:11:30

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\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

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 103638
STRUCTURAL COMPONENT ONLY

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

Dry | 1 span | No cantilevers | 0/12 slope (deg) December 15, 2017 12:11:30

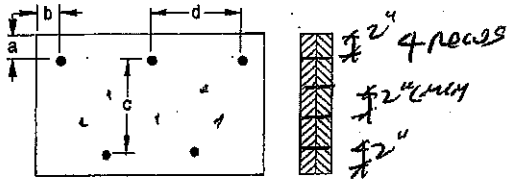
BC CALC® Design Report

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\Basment\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:) 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.

LICENSED PROFESSIONAL ENGINEER
2676
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10363-B
STRUCTURAL COMPONENT ONLY

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

Boise Cascade

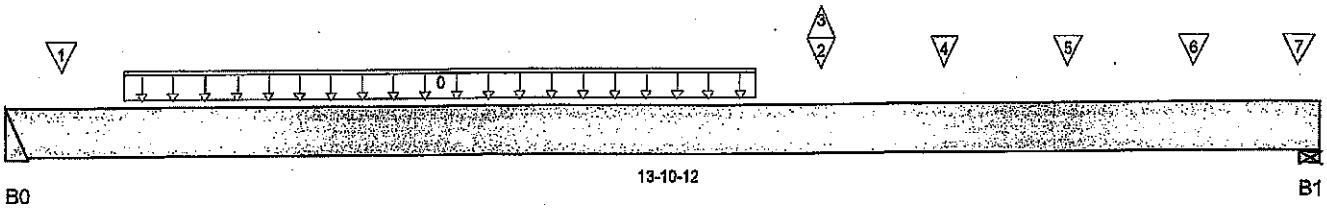
Dry | 1 span | No cantilevers | 0/12 slope (deg)

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\Basment\Flush Beams\B10L(i191
Specifier:
Designer:
Company:
Misc:



Total Horizontal Product Length = 13-10-12

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(i882)	Conc. Pt. (lbs)	L	00-06-12	00-06-12	243	122			n/a
2	J1(i1956)	Conc. Pt. (lbs)	L	08-06-12	08-06-12	138	69			n/a
3	J1(i1956)	Conc. Pt. (lbs)	L	08-06-12	08-06-12	-1				n/a
4	J2(i1910)	Conc. Pt. (lbs)	L	09-10-12	09-10-12	152	76			n/a
5	J2(i1949)	Conc. Pt. (lbs)	L	11-02-12	11-02-12	152	76			n/a
6	J2(i1917)	Conc. Pt. (lbs)	L	12-06-12	12-06-12	141	70			n/a
7	E39(i910)	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	06-06-12
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

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM10364-B
STRUCTURAL COMPONENT ONLY

Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basment\...\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\Basment\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.

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM/0364
STRUCTURAL COMPONENT ONLY

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

Boise Cascade

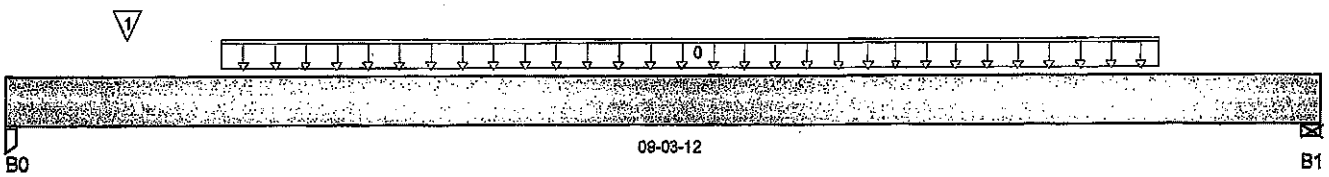
BC CALC® Design Report

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

December 15, 2017 12:11:30

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\B11L(i869
Specifier:
Designer:
Company:
Misc:



Total Horizontal Product Length = 09-03-12

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	01-06-04	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

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

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.

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
ONTARIO

DWG NO: TAM-17-03658
STRUCTURAL COMPONENT ONLY

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

Boise Cascade

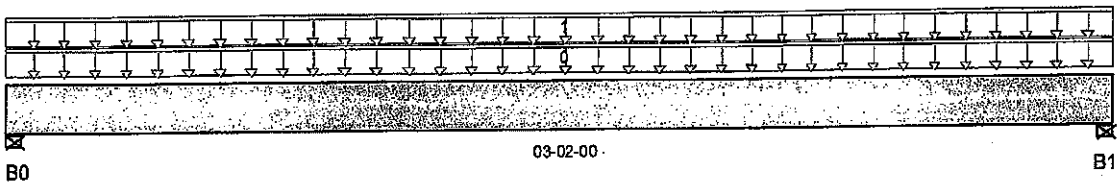
BC CALC® Design Report

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

December 15, 2017 12:11:31

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\B1A(i2158
Specifier:
Designer:
Company:
Misc:



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

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 103628
STRUCTURAL COMPONENT ONLY

Boise Cascade

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

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

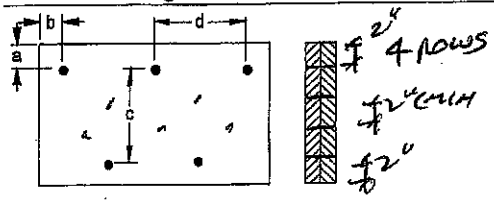
December 15, 2017 12:11:31

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\Basment\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 [illegible] 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.

LICENSED PROFESSIONAL ENGINEER
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM-10366
STRUCTURAL COMPONENT ONLY

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

Boise Cascade

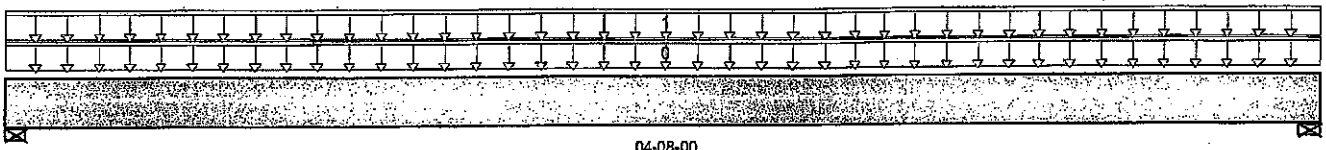
BC CALC® Design Report

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

December 15, 2017 12:11:31

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\B1C(i2013
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(i905)	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.
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

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10362-18
STRUCTURAL COMPONENT ONLY

Boise Cascade

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

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

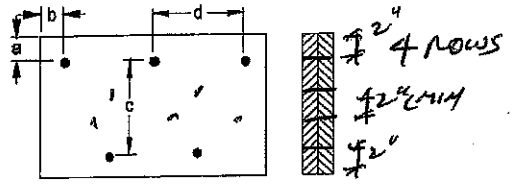
December 15, 2017 12:11:31

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\Basment\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 Sq. 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.

DWG NO. TAM 10767-00
STRUCTURAL COMPONENT ONLY

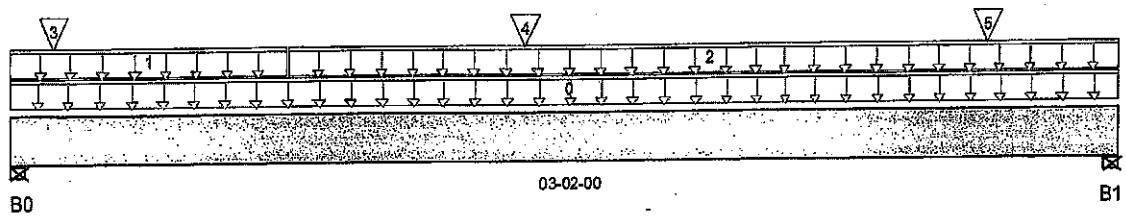
Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Basment\...\B1B(i2122)

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\Basment\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

LICENSED PROFESSIONAL ENGINEER
2266
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 1036B
STRUCTURAL COMPONENT ONLY

Boise Cascade

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

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

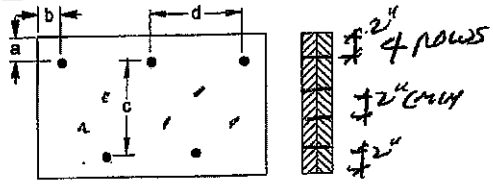
December 15, 2017 12:11:31

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\Basment\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

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.

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM/5366/18
STRUCTURAL COMPONENT ONLY

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

Boise Cascade

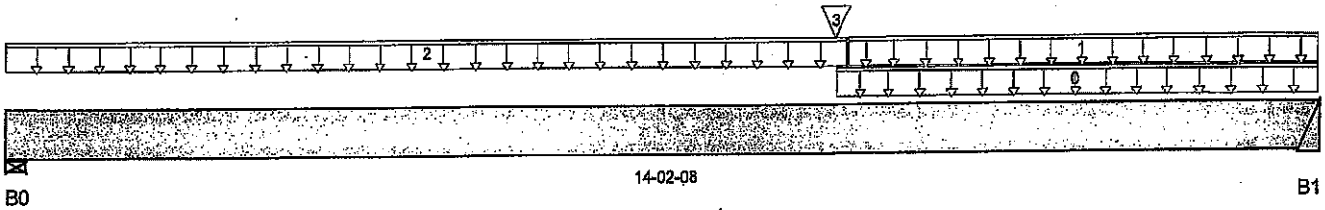
BC CALC® Design Report

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

December 15, 2017 12:11:32

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(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

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10369
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)

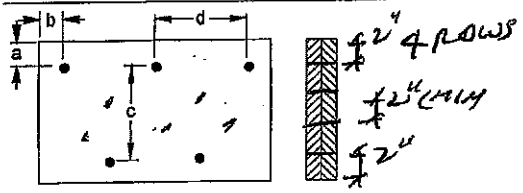
December 15, 2017 12:11:32

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

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.

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10369 Plan
STRUCTURAL COMPONENT ONLY

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

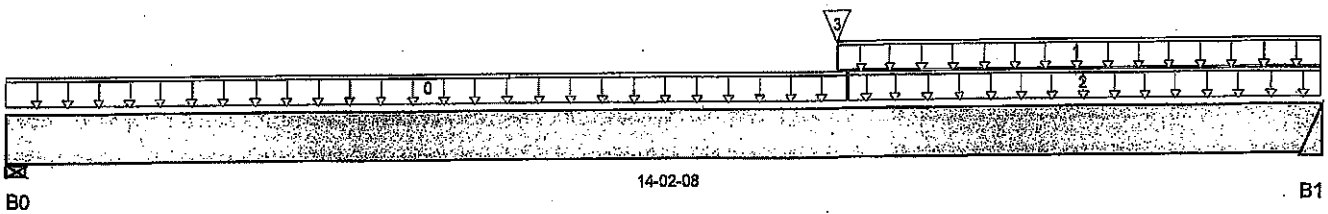
Dry | 1 span | No cantilevers | 0/12 slope (deg)

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\Basment\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		Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
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

LICENSED PROFESSIONAL ENGINEER
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10370-18
STRUCTURAL COMPONENT ONLY

Boise Cascade

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

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

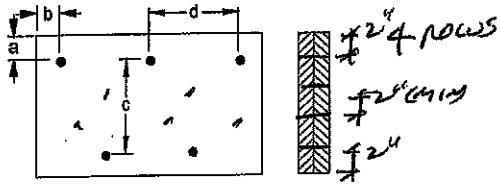
December 15, 2017 12:11:32

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\Basment\Flush Beams\B20(i20
Specifier:
Designer:
Company:
Misc:

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" [illegible] 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 1-800-984-6999 before installation.

LICENSED PROFESSIONAL ENGINEER
22678
S KATSOULAKOS
ONTARIO

DWG NO. TAM 103702
STRUCTURAL
COMPONENT ONLY

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

Boise Cascade

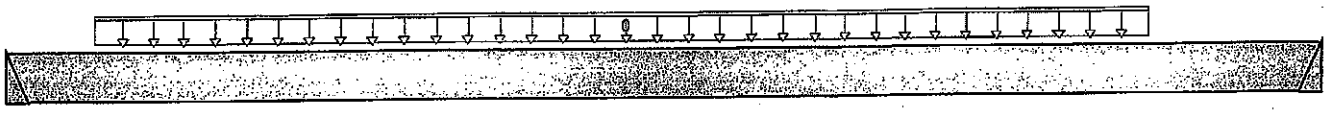
Dry | 1 span | No cantilevers | 0/12 slope (deg)

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(i2115
Specifier:
Designer:
Company:
Misc:



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

LICENSED PROFESSIONAL ENGINEER
2268
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10371-8
STRUCTURAL
COMPONENT ONLY

Boise Cascade

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)

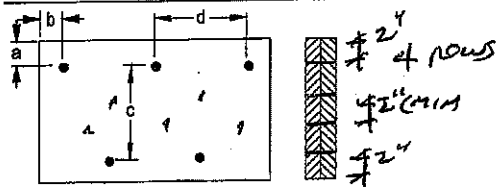
December 15, 2017 12:11:32

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:
Misc:

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

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.

LICENSED PROFESSIONAL ENGINEER
22678
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM/10371-17
STRUCTURAL
COMPONENT ONLY

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

Boise Cascade

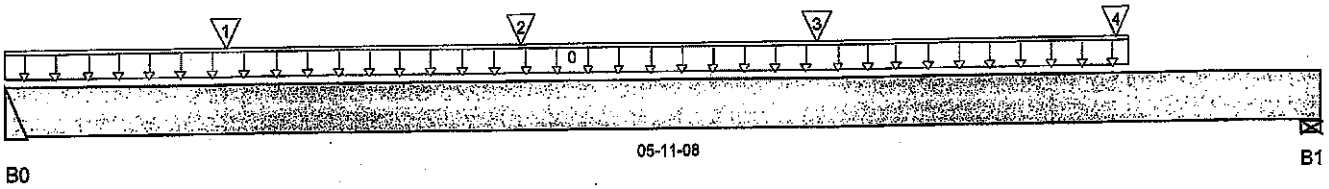
Dry | 1 span | No cantilevers | 0/12 slope (deg)

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(i2165)
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(i1032)	Conc. Pt. (lbs)	L	00-11-14	00-11-14	224	112			n/a
2	J4(i1035)	Conc. Pt. (lbs)	L	02-03-14	02-03-14	242	121			n/a
3	J4(i1041)	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

CONFORMS TO OBC 2012

LICENSED PROFESSIONAL ENGINEER
22670
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 1037248
STRUCTURAL COMPONENT ONLY

Boise Cascade

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)

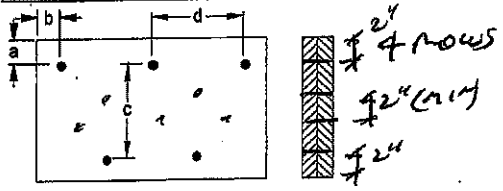
December 15, 2017 12:11:32

BC 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(i21
Specifier:
Designer:
Company:
Misc:

Connection Diagram



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

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 [illegible] 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.

LICENSED PROFESSIONAL ENGINEER
2266
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10372
STRUCTURAL COMPONENT ONLY

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

Boise Cascade

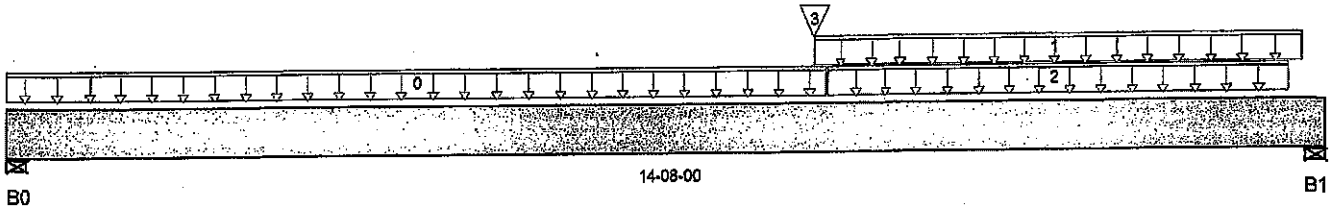
BC CALC® Design Report

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

December 15, 2017 12:11:33

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

		Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
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.
CONFORMS TO OBC 2012
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

LICENSED PROFESSIONAL ENGINEER
22676
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10373-B
STRUCTURAL COMPONENT ONLY

Boise Cascade

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)

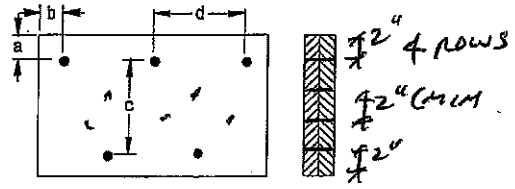
December 15, 2017 12:11:33

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(i21
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: [illegible] 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.

LICENSED PROFESSIONAL ENGINEER
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 103738
STRUCTURAL COMPONENT ONLY

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

Boise Cascade

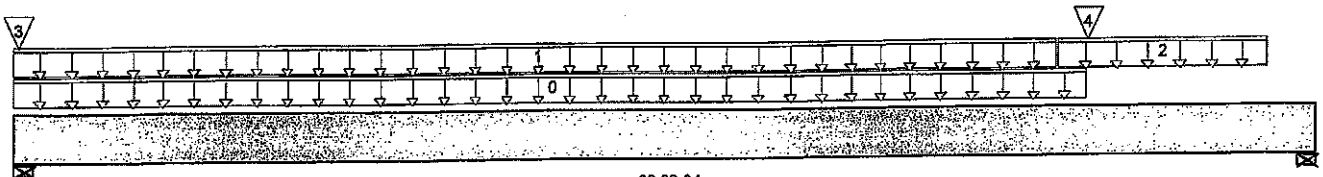
Dry | 1 span | No cantilevers | 0/12 slope (deg)

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 0.65	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	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.
CONFORMS TO OBC 2012
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

LICENSED PROFESSIONAL ENGINEER
2676
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM / 0374-17
STRUCTURAL COMPONENT ONLY

Boise Cascade

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)

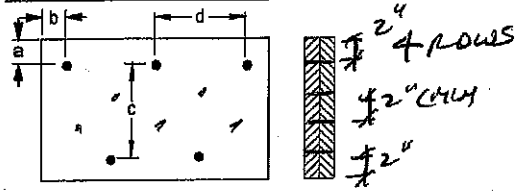
December 15, 2017 12:11:33

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(i21
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: [illegible] 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.

LICENSED PROFESSIONAL ENGINEER
2161B
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM/0374-17
STRUCTURAL COMPONENT ONLY

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

Boise Cascade

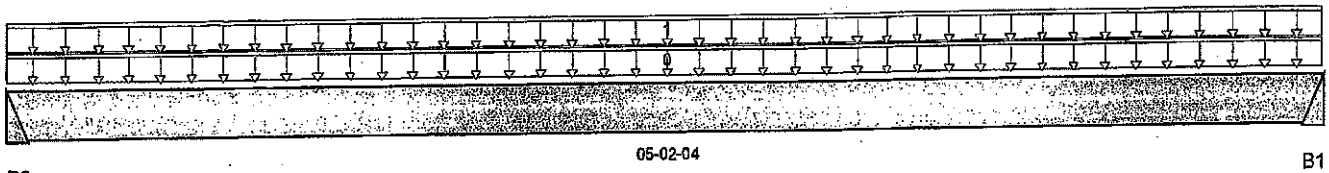
Dry | 1 span | No cantilevers | 0/12 slope (deg)

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:



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

LICENSED PROFESSIONAL ENGINEERS
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10375-18
STRUCTURAL COMPONENT ONLY

Boise Cascade

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)

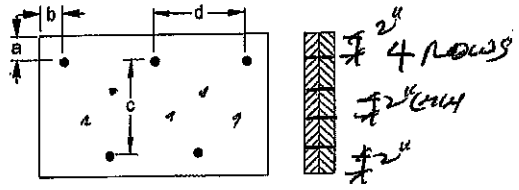
December 15, 2017 12:11:33

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(i216
Specifier:
Designer:
Company:
Misc:

Connection Diagram



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

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.

LICENSED PROFESSIONAL ENGINEER
22616
S KATSOULAKOS
ONTARIO

DWG NO. TAM/0375-17
STRUCTURAL
COMPONENT ONLY

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

Boise Cascade

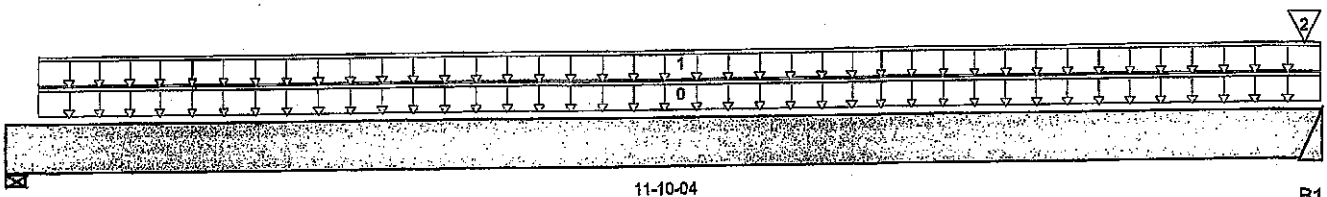
Dry | 1 span | No cantilevers | 0/12 slope (deg)

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:



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	01-03-06
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		Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
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 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

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
OF ONTARIO

DWG NO. TAM 1037628
STRUCTURAL COMPONENT ONLY

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

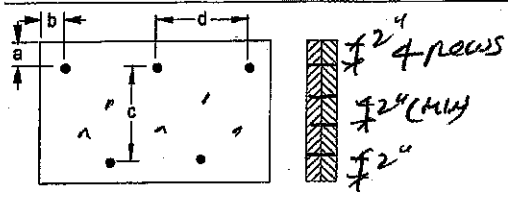
Dry | 1 span | No cantilevers | 0/12 slope (deg) December 15, 2017 12:11:34

BC 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(i207
Specifier:
Designer:
Company:
Misc:

Connection Diagram



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 to [illegible] 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 1-800-864-6999 before installation.

LICENSED PROFESSIONAL ENGINEER
22616
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM/053768
STRUCTURAL COMPONENT ONLY

Boise Cascade

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

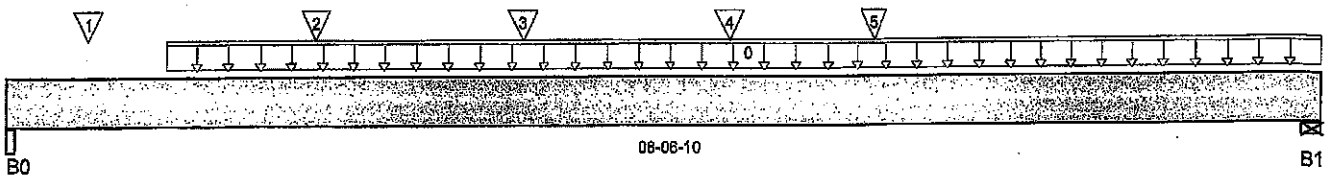
Dry | 1 span | No cantilevers | 0/12 slope (deg)

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 1.00	Dead 0.65	Snow 1.00	Wind 1.15	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	276	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

LICENSED PROFESSIONAL ENGINEER
22678
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10377-18
STRUCTURAL COMPONENT ONLY

Boise Cascade

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)

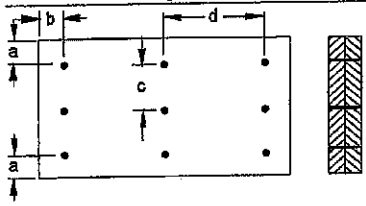
December 15, 2017 12:11:34

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(I20:
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 [illegible] n 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.

LICENSED PROFESSIONAL ENGINEER
22646
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 103778
STRUCTURAL COMPONENT ONLY

Boise Cascade

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

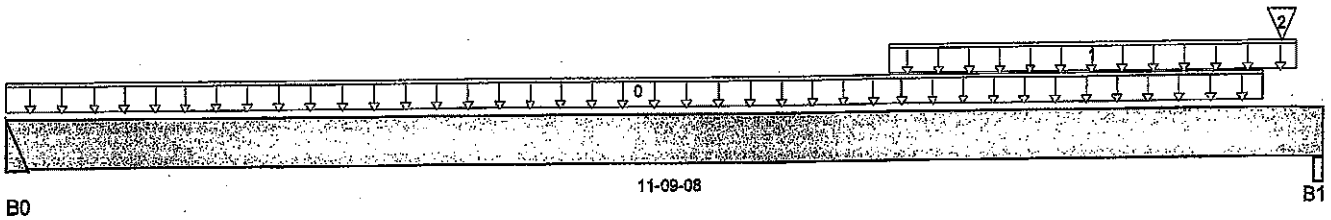
Dry | 1 span | No cantilevers | 0/12 slope (deg)

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

LICENSED PROFESSIONAL ENGINEER
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM/1037
STRUCTURAL
COMPONENT ONLY

Boise Cascade

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)

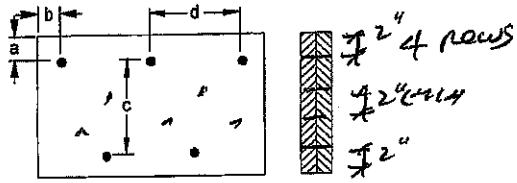
December 15, 2017 12:11:34

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: 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.

LICENSED PROFESSIONAL ENGINEER
2968
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM/0378-18
STRUCTURAL
COMPONENT ONLY

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

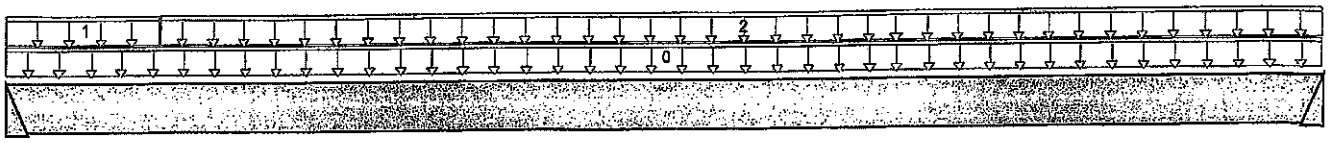
Dry | 1 span | No cantilevers | 0/12 slope (deg)

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:



B0 08-02-04 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 0.65	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

LICENSED PROFESSIONAL ENGINEER
2268
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM/037/18
STRUCTURAL
COMPONENT ONLY

Boise Cascade

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)

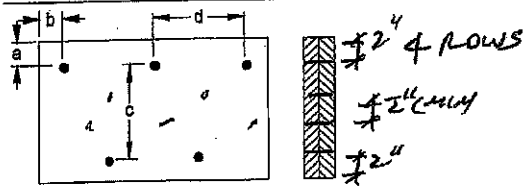
December 15, 2017 12:11:35

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(i207
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.

LICENSED PROFESSIONAL ENGINEER
22678
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10379-R2
STRUCTURAL
COMPONENT ONLY

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

Boise Cascade

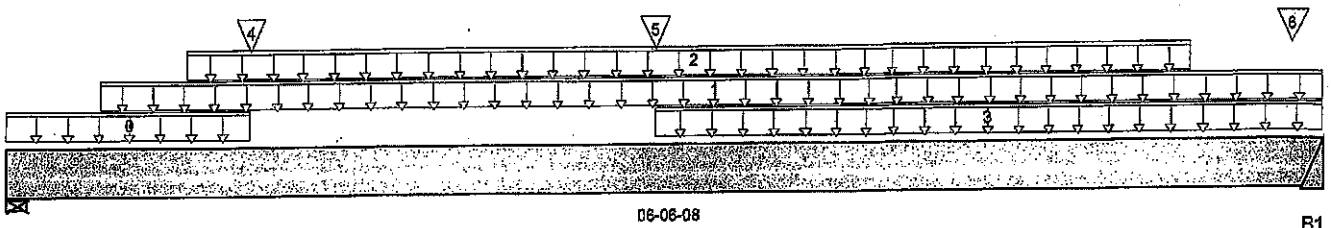
Dry | 1 span | No cantilevers | 0/12 slope (deg)

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:



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	Trib.
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

LICENSED PROFESSIONAL ENGINEER
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10380
STRUCTURAL
COMPONENT ONLY

Boise Cascade

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

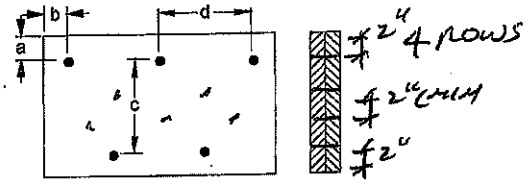
BC CALC® Design Report

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(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. 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.

LICENSED PROFESSIONAL ENGINEER
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 103828
STRUCTURAL COMPONENT ONLY

Boise Cascade

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

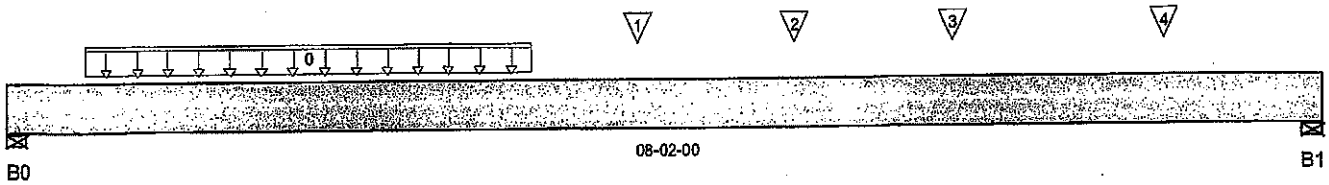
Dry | 1 span | No cantilevers | 0/12 slope (deg)

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:



Total Horizontal Product Length = 08-02-00

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

LICENSED PROFESSIONAL ENGINEER
S KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10396
STRUCTURAL
COMPONENT ONLY

Boise Cascade

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)

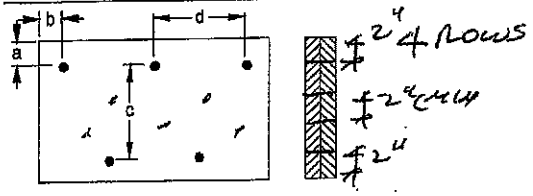
December 15, 2017 12:11:35

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.

LICENSED PROFESSIONAL ENGINEER
22607
S. KATSOULAKOS
PROVINCE OF ONTARIO

DWG NO. TAM 10381-17
STRUCTURAL COMPONENT ONLY