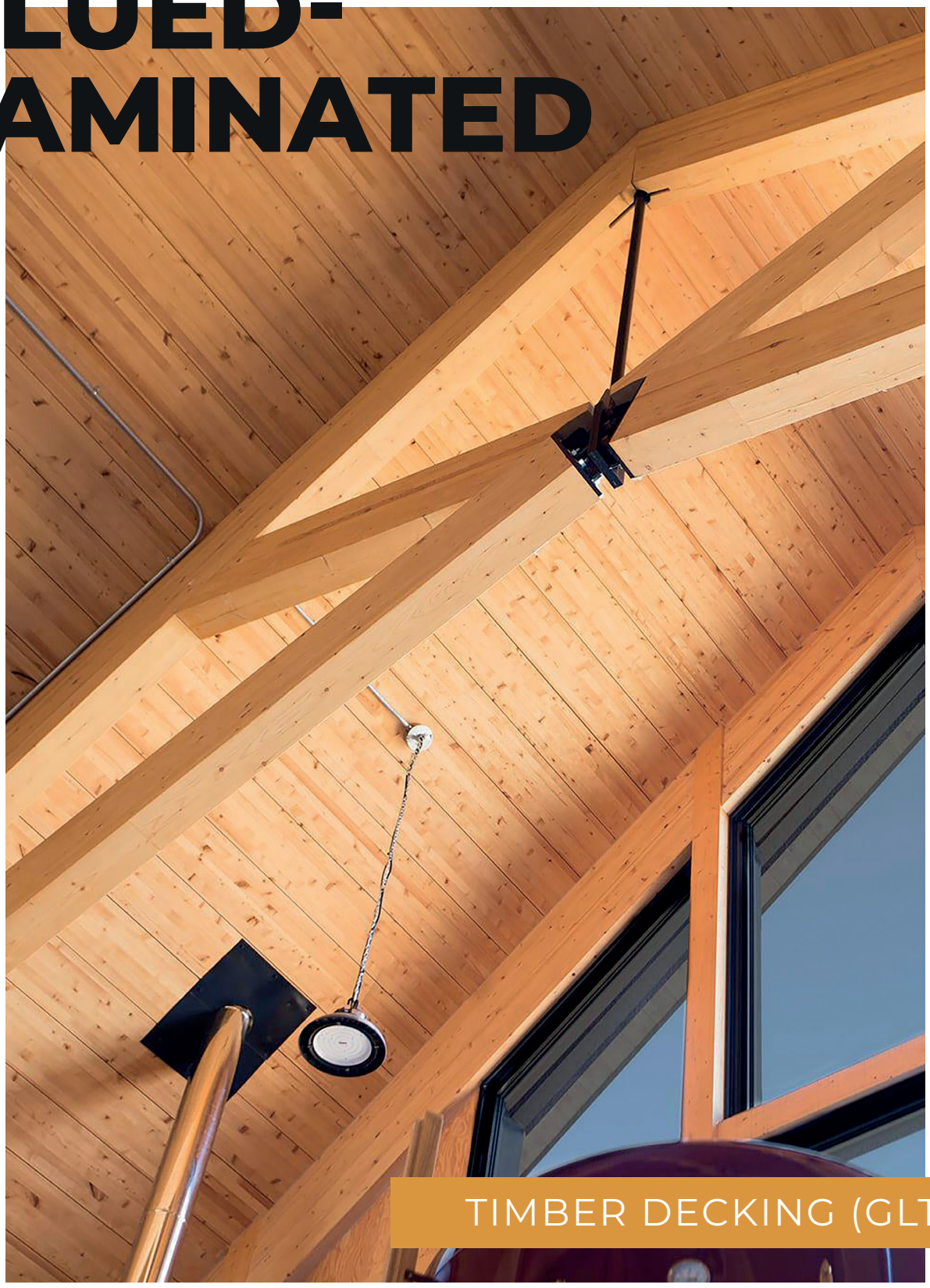
ART MASSIF

WOOD STRUCTURE

TECHNICAL SHEET

TABLE OF CONTENTS

GLUED-LAMINATED



TIMBER DECKING (GLT)

GLUED-LAMINATED TIMBER DECKING (GLT)

TECHNICAL DATA

Species
Black spruce

Grade
SPF #2&BTR

Applications
Decking or roofing

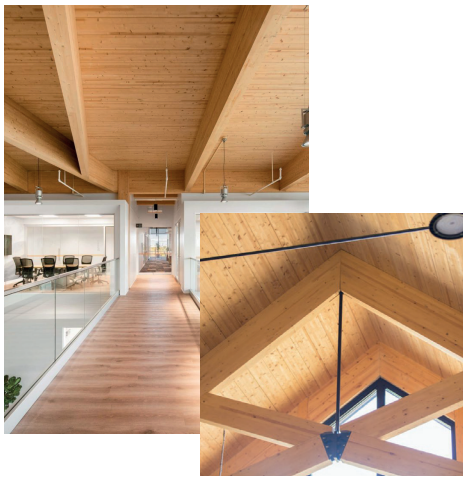
Appearance grade
Architectural

Wood moisture content
12% +- 2%

Thicknesses
1 ½", 2 3/8", 3 1/8", 5 1/8"
38 mm, 60 mm, 80 mm, 130 mm

Lengths
Up to 32' (9.75 m)

Relative density
G = 0,44



* The decking cannot be used as a diaphragm. Plywood must be added to act as the diaphragm.

TECHNICAL PROFILES

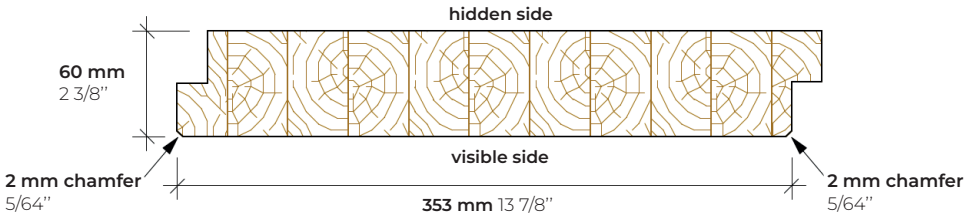
Thickness
38 mm . 1 1/2''

Coverage width
363 mm . 14 5/16''

TECHNICAL PROFILES

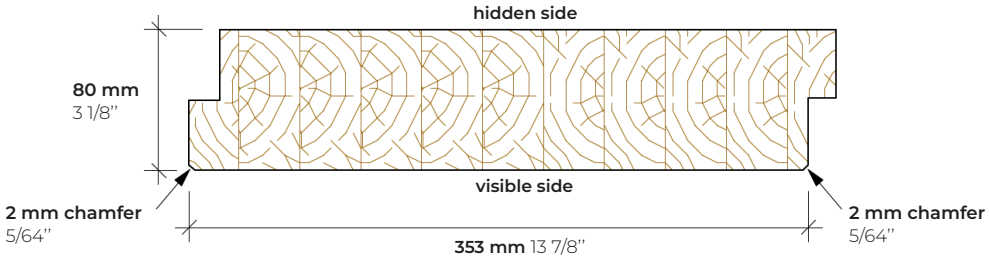
Thickness
60 mm . 2 3/8''

Coverage width
353 mm . 13 7/8''



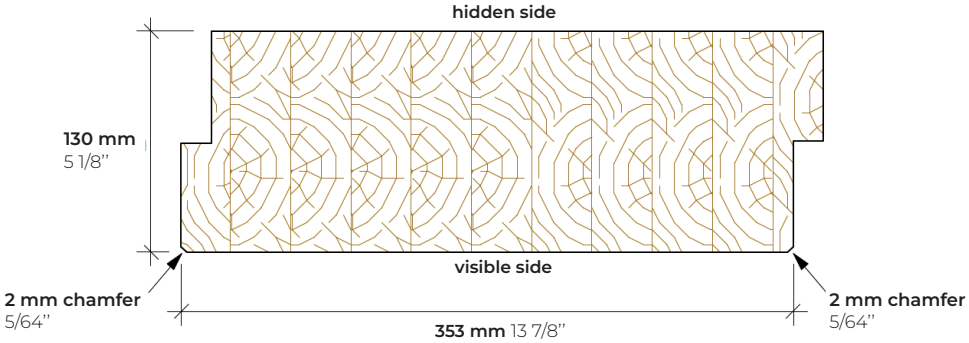
Thickness
80 mm . 3 1/8''

Coverage width
353 mm . 13 7/8''



Thickness
130 mm . 5 1/8''

Coverage width
353 mm . 13 7/8''



info@artmassif.ca | **artmassif.ca** | **418 358-0712**

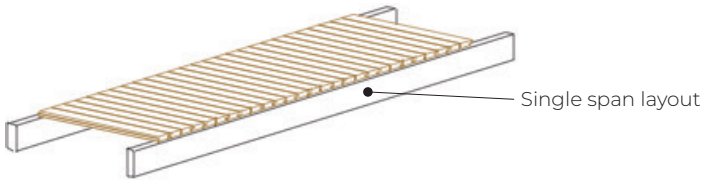
SPAN TABLE

TYPICAL GLT DECKING

SPAN TABLE
TYPICAL GLT DECKING

ART MASSIF DECKING

Glued timber - No.2 and better
Spans calculated under National Building Code of Canada 2015 load combinations and CSA 086-14 design methods. kPa and m converted in psf and ft.



FLOORING
Deflection criteria : L/360 under live loads
L/240 under full loads
Static laods : D = 21 psf

Thickness	1 ½" (38mm)	2 3/8" (60mm)	3 1/8" (80mm)	5 1/8" (130mm)
L = 40 psf	5,25 ft	8,5 ft	11,5 ft	18,7 ft
L = 50 psf	5 ft	7,8 ft	10,5 ft	17,4 ft
L = 100 psf	4 ft	6,2 ft	8,5 ft	13,8 ft

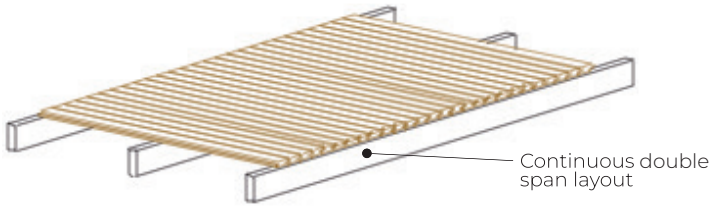
ROOFING
Deflection criteria : L/240 under live loads
L/180 under full loads
Static laods : D = 21 psf

Thickness	1 ½" (38mm)	2 3/8" (60mm)	3 1/8" (80mm)	5 1/8" (130mm)
S = 52 psf	5,6 ft	8,9 ft	12,1 ft	19,7 ft
S = 73 psf	5,25 ft	8,2 ft	11,1 ft	18 ft
S = 94 psf	4,6 ft	7,5 ft	10,1 ft	16,7 ft

SPAN TABLE
TYPICAL GLT DECKING

ART MASSIF DECKING

Glued timber - No.2 and better
Spans calculated under National Building Code of Canada 2015 load combinations and CSA 086-14 design methods. kPa and m converted in psf and ft.



FLOORING
Deflection criteria : L/360 under live loads
tL/240 under full loads
Static laods : D = 21 psf

Thickness	1 ½" (38mm)	2 3/8" (60mm)	3 1/8" (80mm)	5 1/8" (130mm)
L = 40 psf	6,9 ft	11,1 ft	15 ft	25 ft
L = 50 psf	6,5 ft	10,5 ft	14,1 ft	23,3 ft
L = 100 psf	5,25 ft	8,2 ft	11,1 ft	18,4 ft

ROOFING
Deflection criteria : L/240 under live loads
L/180 under full loads
Static laods : D = 21 psf

Thickness	1 ½" (38mm)	2 3/8" (60mm)	3 1/8" (80mm)	5 1/8" (130mm)
S = 52 psf	7,5 ft	11,8 ft	16 ft	26,25 ft
S = 73 psf	6,9 ft	10,8 ft	14,8 ft	24,3 ft
S = 94 psf	6,2 ft	9,85 ft	13,4 ft	22 ft

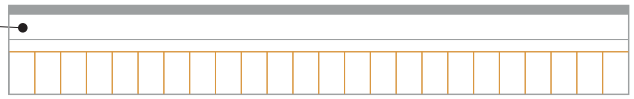
This table should be used as a guide only. The values provided give an estimate of possible ranges. Refer to an engineer for full verification based on the actual conditions of the project being designed.

FLOORING AND ROOFTING COMPOSITION

DIAGRAM

DIAGRAM FOR **FLOORING AND ROOFTING COMPOSITION**

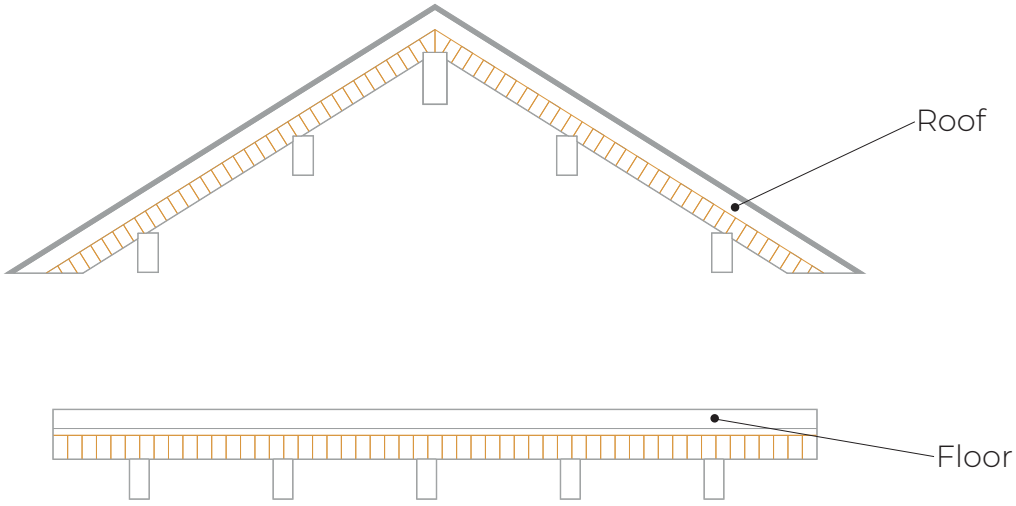
Roof composition by architect
E.g., vapor barrier, insulation, roof covering



- **Plywood 1/2 in. minimum**
- **Art Massif wood decking**

Floor composition by architect
E.g., insulation, acoustic membrane, concrete screed plywood, floor covering

- **Plywood 1/2 in. minimum**
- **Art Massif wood decking**



1. The architect must comply with the National Building Code of Canada requirements for floor and roof compositions.

2. Plywood of at least ½ in. thick must be applied over the decking to take the diaphragm forces and for a uniform surface. Design of the diaphragm must be done by the structural engineer.

3. It is a good idea to leave the decking visible under the floor or roof to add architectural interest and to save on materials.

BEAMS AND COLUMNS

STANDARD SECTION

BEAMS
AND COLUMS

TECHNICAL DATA

Species
Black spruce and jack pine (SP)
contains 90% black spruce

Strength grade
20f-EX, 12c-E

Appearance grade
Architectural

Manufacturing
Certified products CSA 0122-16
Certified plant CSA O177-06
Certified adhesive CSA 0112.9

Inspection agency
APA plant no. 1104

Wood moisture content
12% +- 2%

Lamella thickness
1 3/8“ (34.7 mm)

Widths
3 1/8" 5 1/8" 6 7/8" 8 7/16" 10 7/1" 12 3/8" 14 3/8“
80 mm, 130 mm, 175 mm, 215 mm, 265 mm, 315 mm, 365 mm

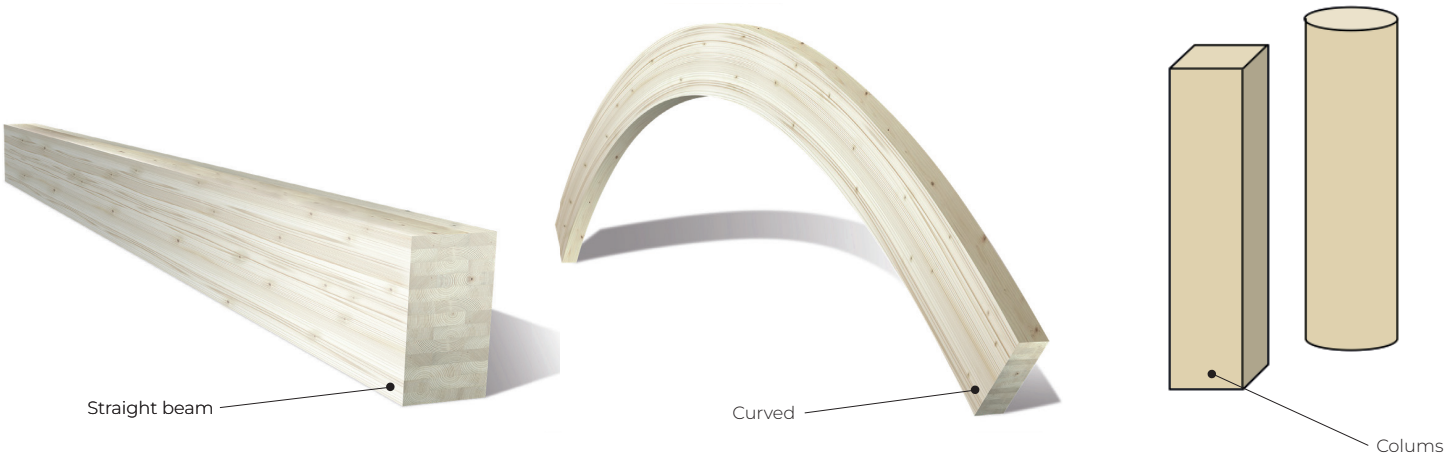
Heights
From 4-1/8” to 49-3/16” (104 mm → 1,249 mm)
in 34.7 mm increments
* Additional heights available on request

Lenghts
Continuous elements without joints: up to 68’ (20.7 m)

Dimensional tolerances

Width	+- 2 mm
Height	+-0.4 mm per lamella for a max of +- 6 mm

Relative density
G = 0,44



STANDARD SECTION
BEAMS AND COLUMS

Width	in. (mm)	3 1/8" (80mm)	5 1/8" (130mm)	6 7/8" (175mm)	8 7/16" (215mm)	10 7/16" (265mm)	12 3/8" (315mm)	14 3/8" (365mm)
Height	**mm**							
4 1/8"	104	X						
5 1/2"	139	X	X					
6 7/8"	174	X	X	X				
8 3/16"	208	X	X	X	X			
9 9/16"	243	X	X	X	X	X		
10 15/16"	278	X	X	X	X	X		
12 5/16"	312	X	X	X	X	X	X	X
13 11/16"	347	X	X	X	X	X	X	X
15 1/16"	382	X	X	X	X	X	X	X
16 3/8"	416	X	X	X	X	X	X	X
17 3/4"	451	X	X	X	X	X	X	X
19 1/8"	486	X	X	X	X	X	X	X
20 1/2"	521	X	X	X	X	X	X	X
21 7/8"	555	X	X	X	X	X	X	X
23 1/4"	590	X	X	X	X	X	X	X
24 5/8"	625	X	X	X	X	X	X	X
25 15/16"	659	X	X	X	X	X	X	X
27 5/16"	694	X	X	X	X	X	X	X
28 11/16"	729	X	X	X	X	X	X	X
30 1/16"	763	X	X	X	X	X	X	X
31 7/16"	798	X	X	X	X	X	X	X
32 13/16"	833	X	X	X	X	X	X	X
34 3/16"	868	X	X	X	X	X	X	X
35 1/2"	902	X	X	X	X	X	X	X
36 7/8"	937	X	X	X	X	X	X	X
38 1/4"	972	X	X	X	X	X	X	X

STANDARD SECTION
BEAMS AND COLUMS
continued

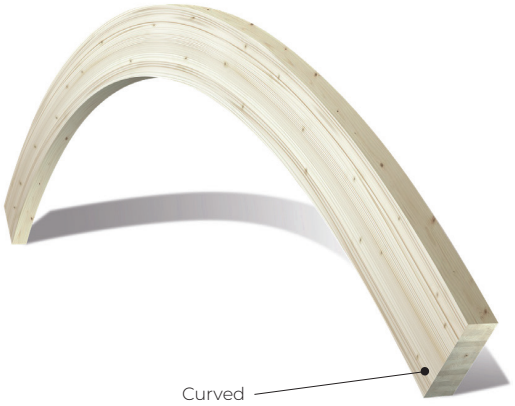
Width	in. (mm)	3 1/8" (80mm)	5 1/8" (130mm)	6 7/8" (175mm)	8 7/16" (215mm)	10 7/16" (265mm)	12 3/8" (315mm)	14 3/8" (365mm)
Height	**mm**							
39 5/8"	1006		X	X	X	X	X	X
41"	1041		X	X	X	X	X	X
42 3/8"	1076		X	X	X	X	X	X
43 11/16"	1110		X	X	X	X	X	X
45 1/16"	1145		X	X	X	X	X	X
46 7/16"	1180		X	X	X	X	X	X
47 13/16"	1215		X	X	X	X	X	X
49 3/16"	1249		X	X	X	X	X	X

ROUND
COLUMNS

Diameters
5" to 14"
125 mm to 355 mm

Lengths
Up to 32' (9,75m)
Up to 16' (4,88m) for small diameters (Ø5")

CURVED BEAM

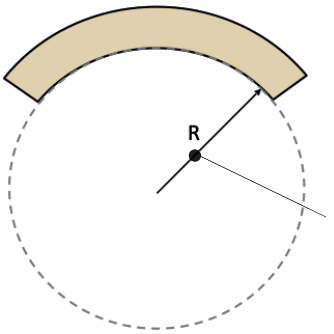


Section heights and widths
Same as for beams and columns

Radii of curvature
Minimum radius of 72” (1,829 mm)

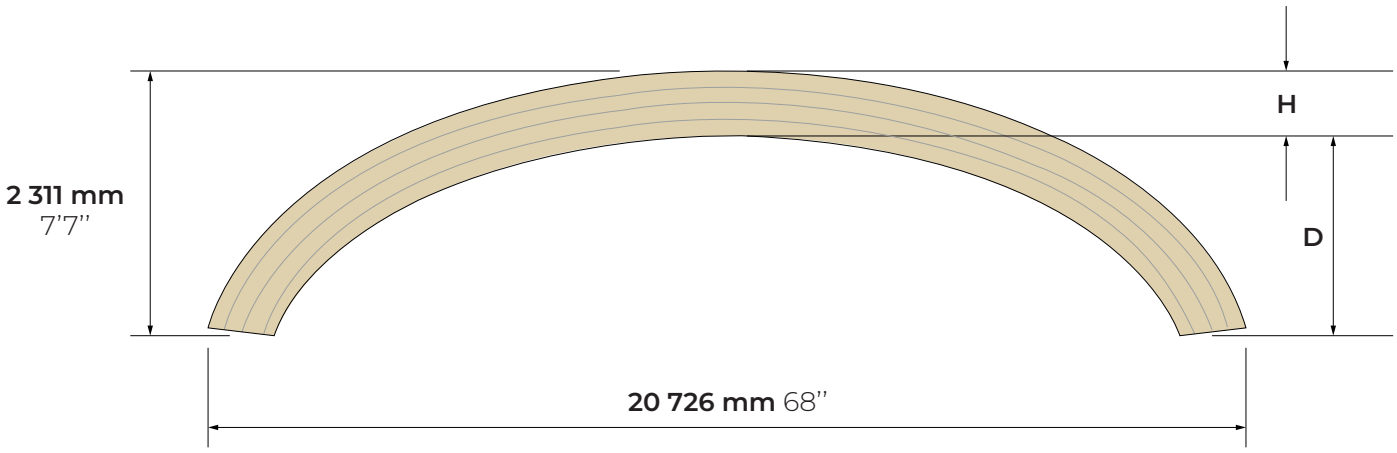
TABLE 1
Lamella thickness based on radii of curvature

Radii of curvature R*		Lamella thickness
(mm)	(in.)	(mm)
9,500+	374+	34,7
6,200-9,499	244-374	25
2,200-6,199	87-244	13
1,829-2,199	72-87	6



***R :** Radius of curvature on the inner surface (intrados).

Curved dimensions
The overall dimensions of the curved beam (a continuous section) must be included in the rectangle below to meet manufacturing limits. Please contact us for other dimensions that fall outside this range.



Clearance : $d = R - \sqrt{R^2 + D^2}$

ART MASSIF

WOOD STRUCTURE

info@artmassif.ca | artmassif.ca | 418 358-0712