Junction 9 Yoga + Pilates Studio

Covered In Fins Made From 100 Year Old Reclaimed Wood

Institute for advanced architecture of Catalonia

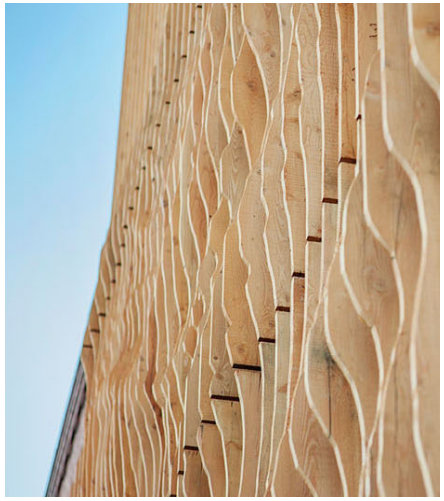
STUDENT: Maria Andrea Gameros

Junction 9 Yoga + Pilates Studio

Modern Office of Architecture + Design (MODA)

Calgary, Alberta, Canada
Type: Commercial
Size: 10,000sf
Year: 2014

The project consists on a reconstruction of an existing concrete building. The façade is screened by vertical fins made from 100 year old fir reclaimed wood with a smooth, textured, topographic appearance, this design replicates the flowing movements happening inside the studio. The shapes and layout of the fins also creates a dynamic facade that appears to change depending on your location both inside the building and while on the street.
To mark the entry into the building the screen morphs from a vertical to a horizontal application above the front entry, forming a soffit condition that bleeds into the main reception area.







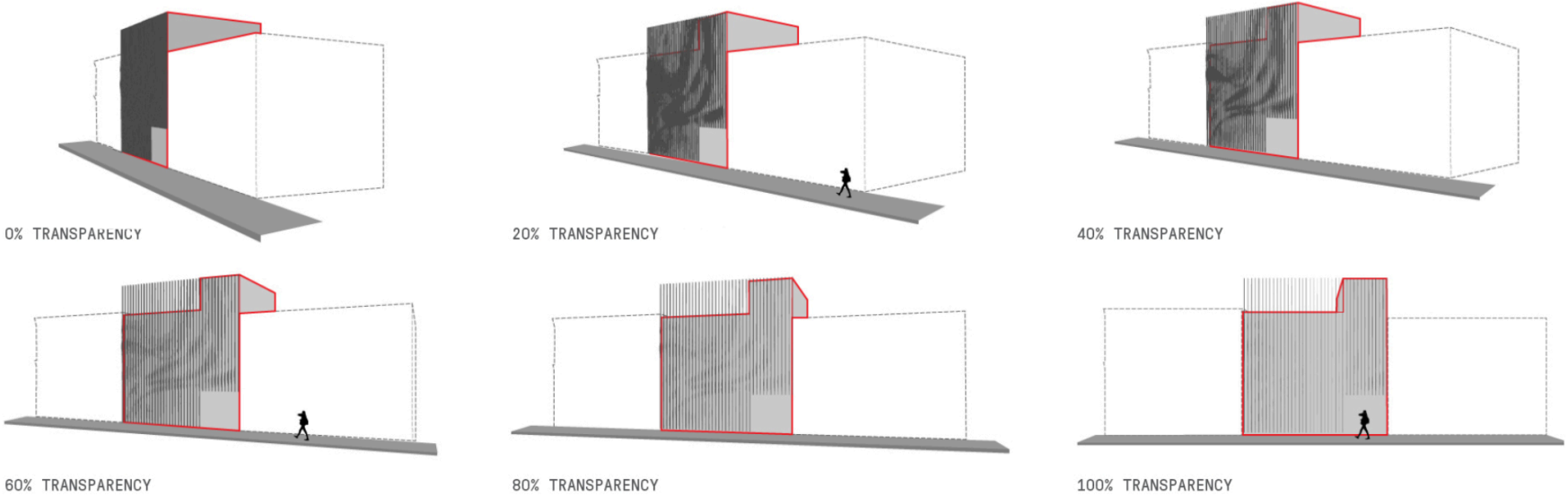
Photography by
MHB PHOTO-GRAF | Marie-Helene Bilodeau

Junction 9 Yoga + Pilates Studio

Modern Office of Architecture + Design (MODA)

The main criteria for the facade was to create a screen to cover the building, the main purpose of the design is the transparency manipulation

- The screen is composed by vertical fins made from 100 year-old fir.
- Each fin is unique following the relief of a topological texture, by varying depths along the fin.



Graphics by Modern Office/ of Design + Architecture
http://moda.ca/inglewood-yoga-studio/

Pseudo Code

1 DEFINE FACADE´S SURFACE

2 DIVIDE SURFACE
Grid

3 DRAW CRUVES ALONG FACADE
Desired flow

4 ATRACTOR POINTS
within the curves and the surface grid points

5 GRAPH MAPPER
To create a defined flow along the facade

6 NEW SURFACE
Grid + Paths+ Atractor points

7 DIVIDE NEW SURFACE
Vertically

8 PROJECT LINES
From the new surface to the Facade

9 RULED SURFACE
Creating vertical strips along the facade

10 EXTRUDE
Define thickness to generate individual and unique fins

FACADE PARAMETERS

FACADE´S SURFACE
Vary on the shape of the building

TRANSPARENCY
Depends on the number of divisions + thickness of the vertical stips

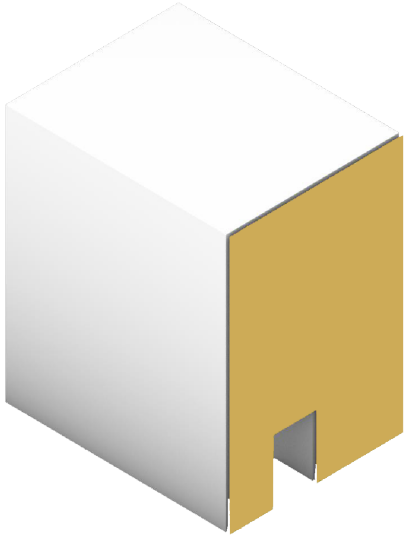
CURVATURE OF THE FACADE
Controled by the graph mapper + Curves

Iaac

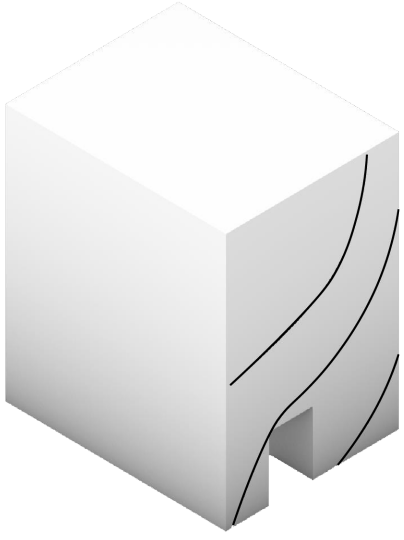
TUTORS: RODRIGO AGUIRRE, MOHAMAD ELATAB
ASSISTANT: IVAN MARCHUK, OANA TAUT

JUNCTION 9 YOGA + PILATES STUDIO
MARIA ANDREA GAMEROS GOMEZ

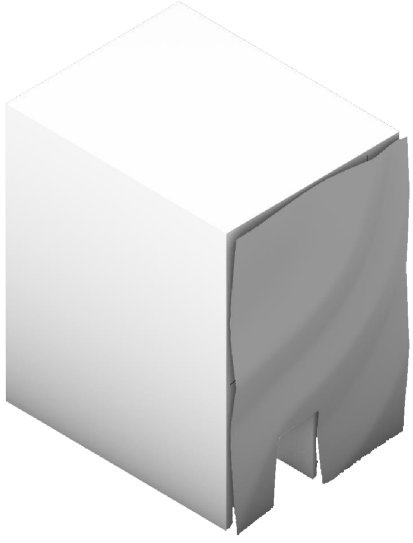
Code Development



DEFINE FACADE´S SURFACE



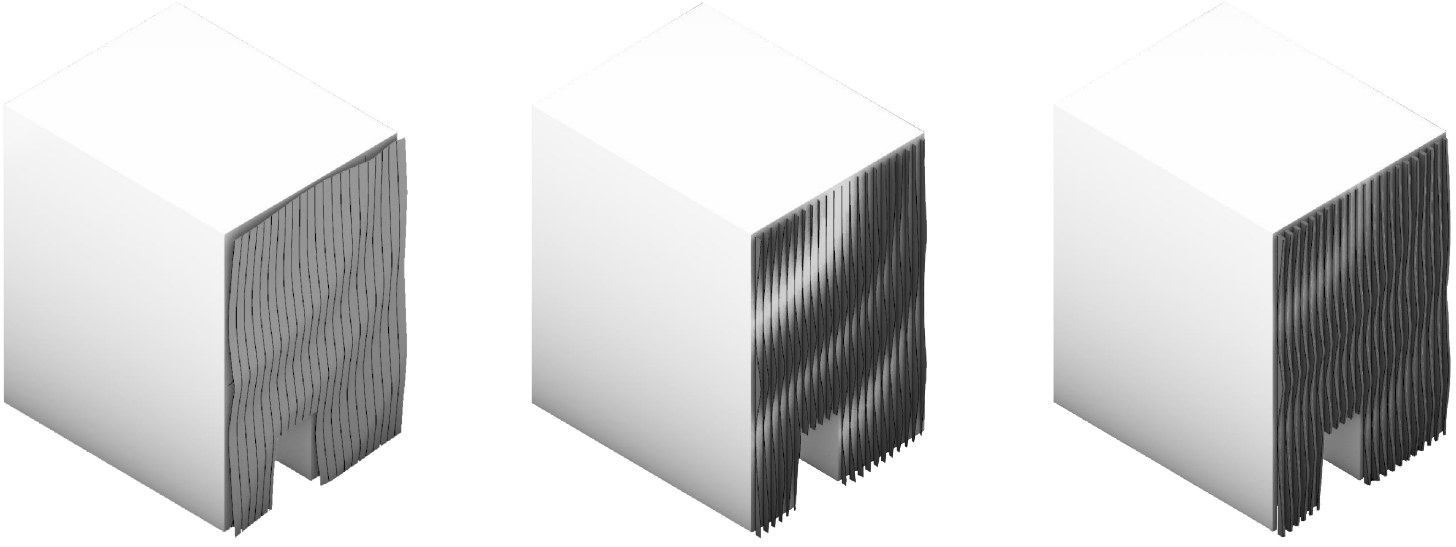
DRAW CRUVES



GENERATE NEW SURFACE

From the attractor points of the curves.

Code Development



DIVIDE NEW SURFACE

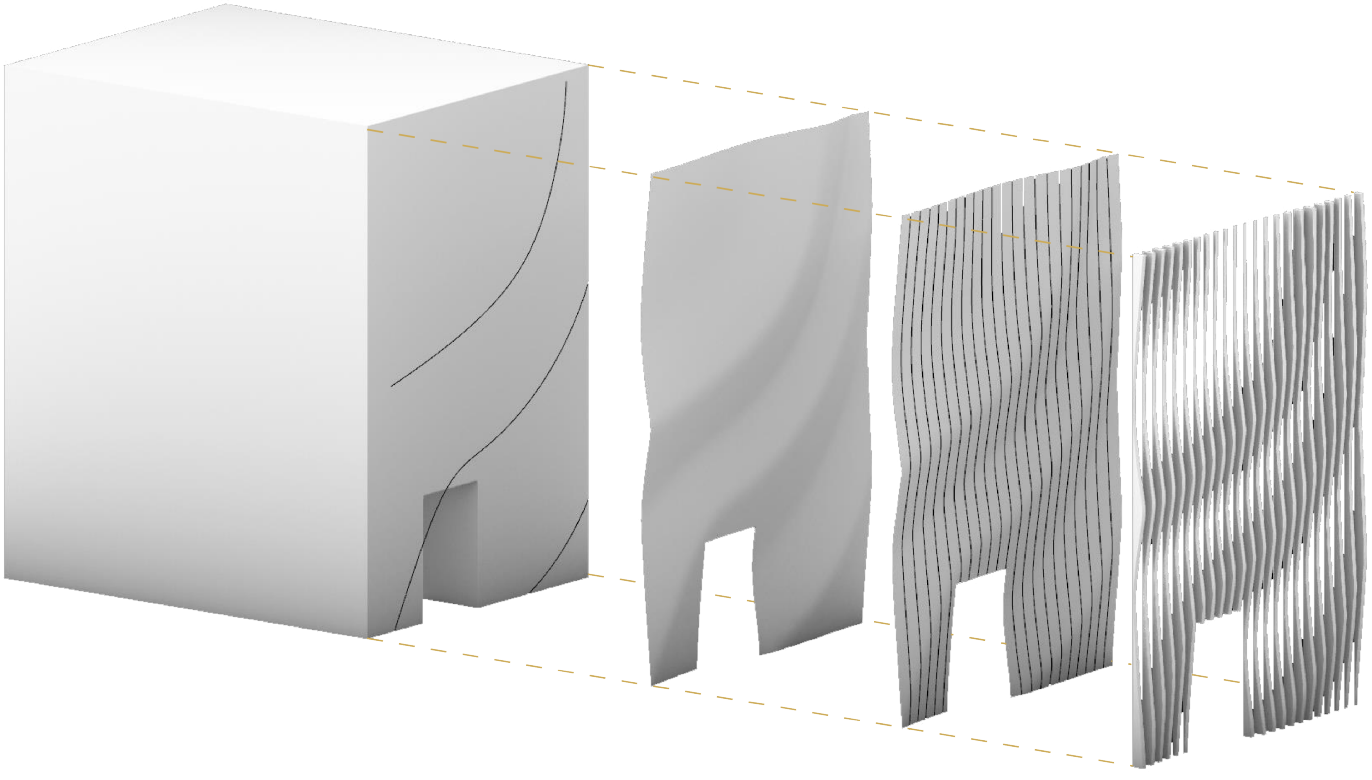
And project lines from the new surf. to the facade

RULED SURFACE

Creating vertical strips along the facade

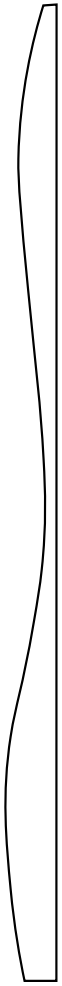
EXTRUDE

Define thickness to generate individual and unique fins



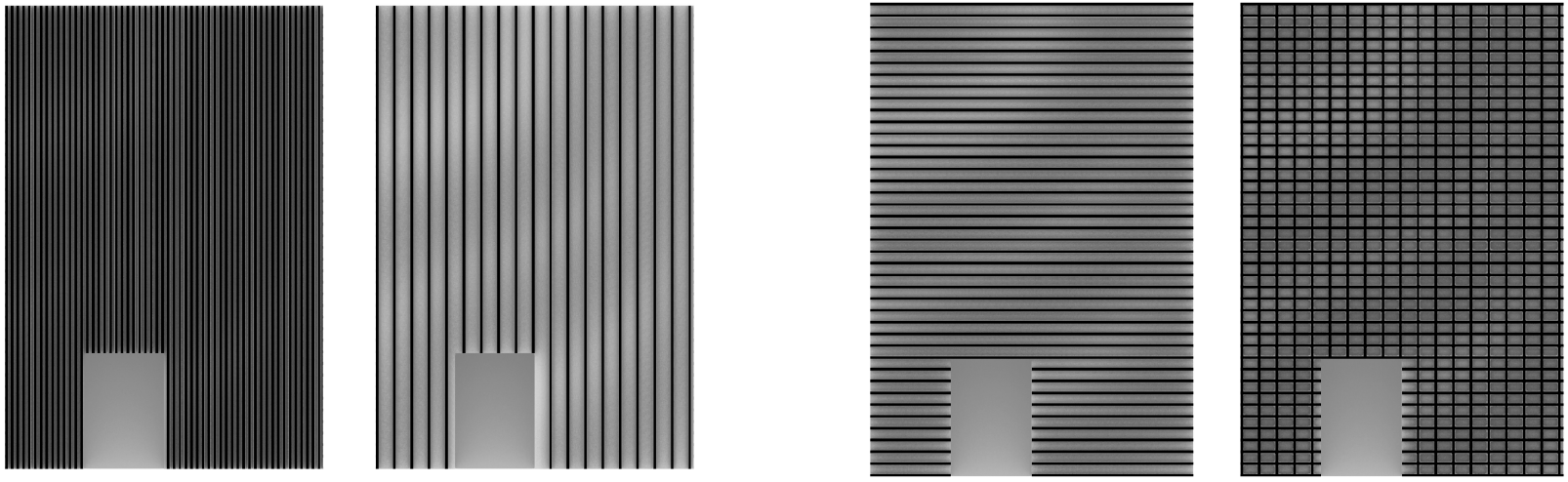
Facade main element

- Individual and unique wood fins, creating a flow-like surface along the façade.
- To create each fin, first we need to stablish the flow lines to create the different depths along each fin.
- The consecution of the fins are creating the feeling of a complete surface.
- The variation of the outcome is infinite, because it is ruled by the flow lines.
- The parameters can vary on the number and thickness of the fins, also generate different variations for the flow with the graph mapper.





Facade iterations



TRANSPARENCY

20%
Contour Distance: .2

60%
Contour Distance: .6

ORIENTATION

Horizontal
Contour Direction: z

Waffle
Contour Direction: x,z



Grasshopper Script

