

ASSIGN 03 | DIGITAL MODEL

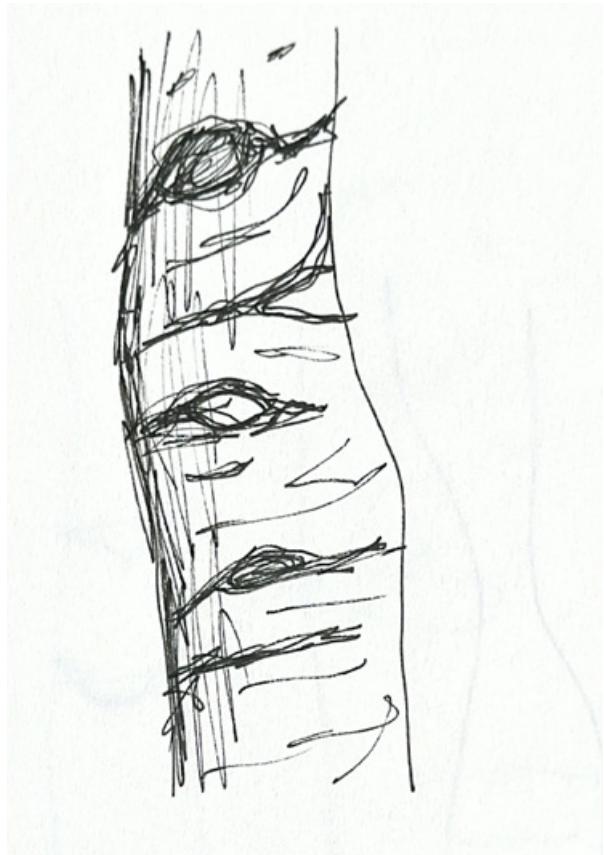


ASSIGN 03

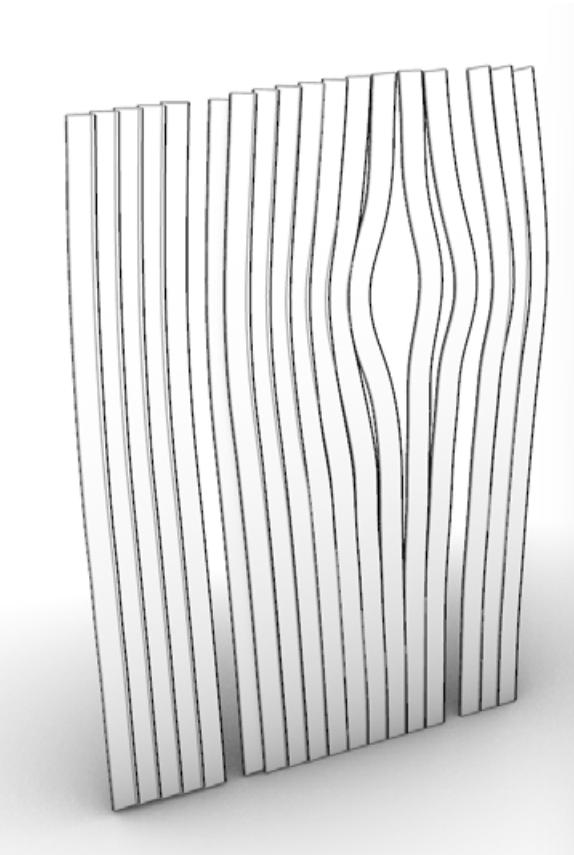
01 INITIAL SKETCH | PAVILLION STRUCTURE

INITIAL IDEAS DERIVED FROM ASPEN TREE

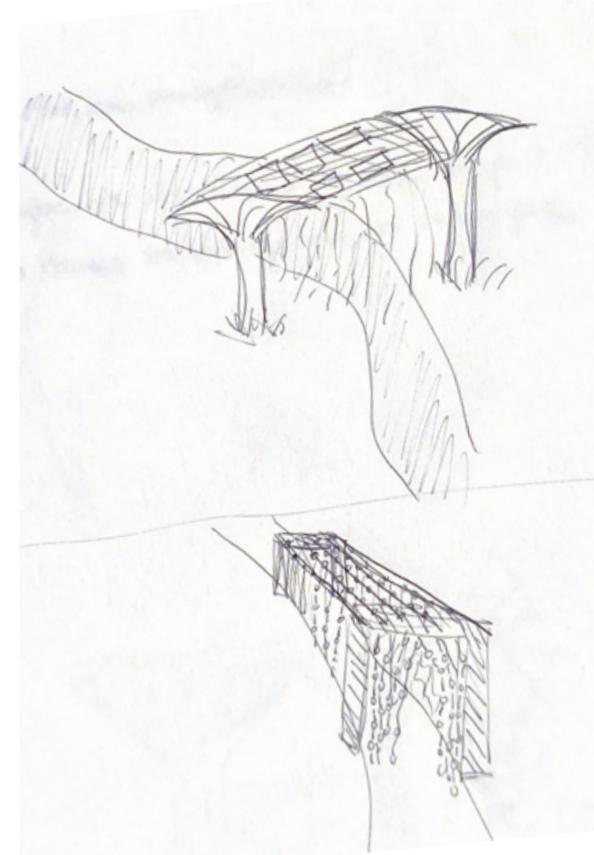
1 MINUTE SKETCH



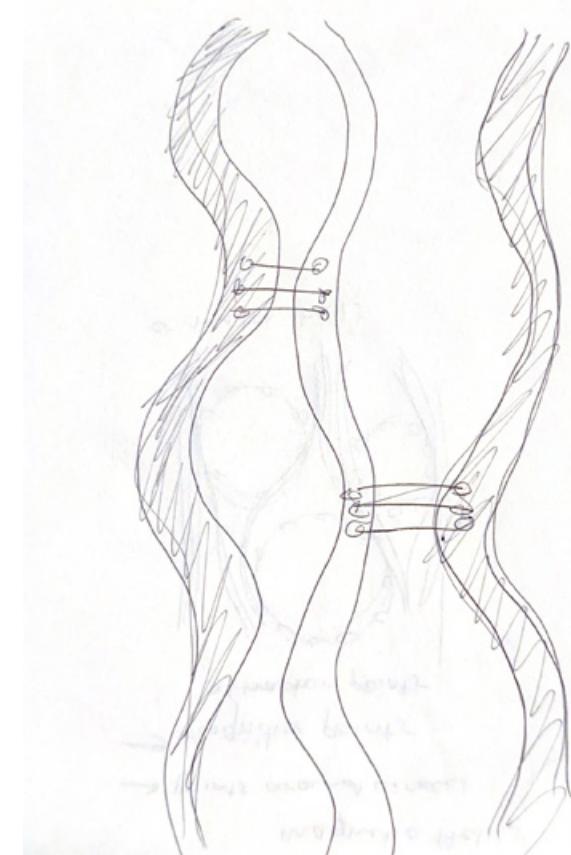
PARAMETRIC GEOMETRY



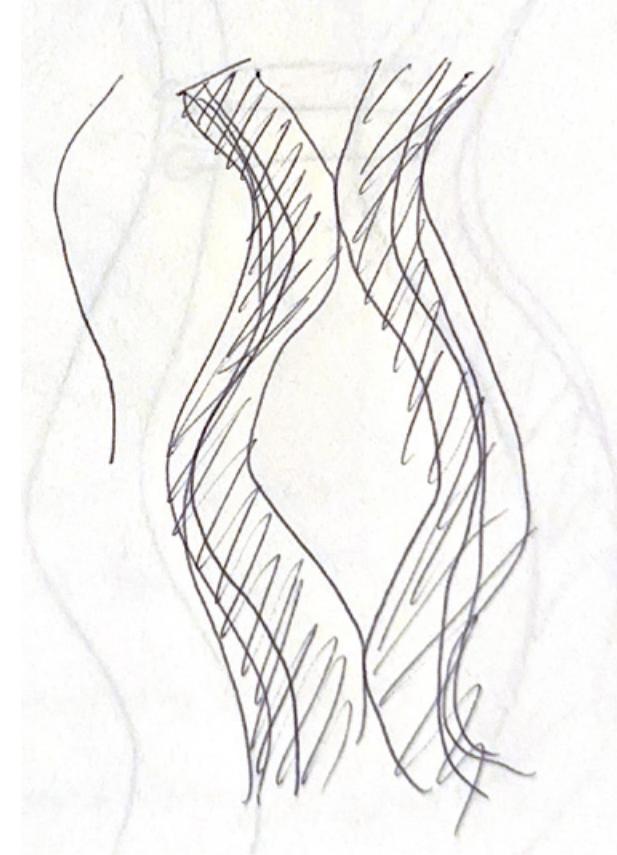
ITERATIVE SKETCHES



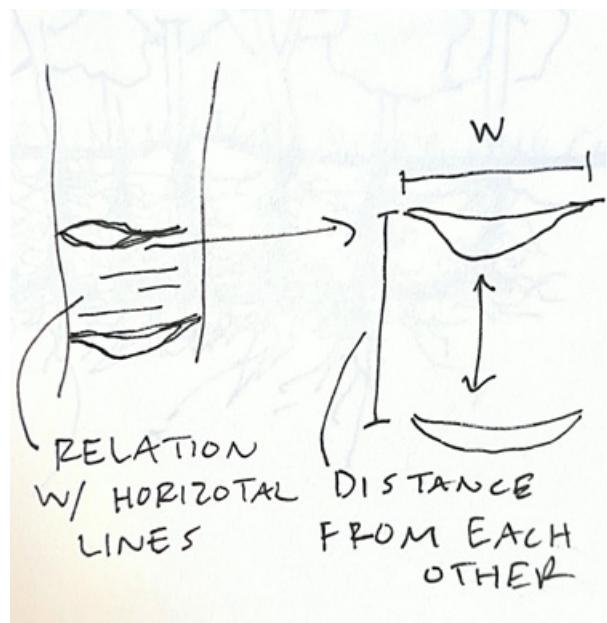
1. WIDTH OF MEMBERS ON ARCH



2. DEPTH OF MEMBERS ON ARCH



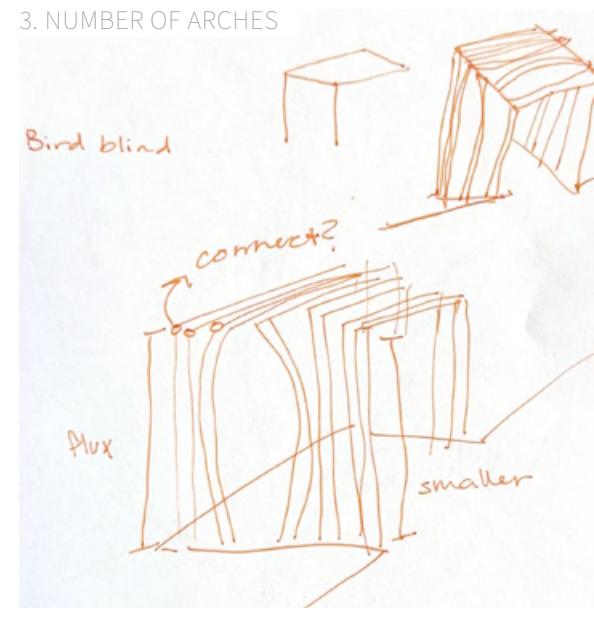
PARAMETRIC SHAPES



PARAMETERS FOR PAVILLION

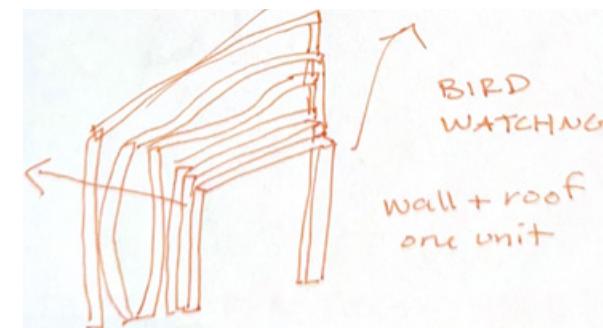
1. WIDTH OF MEMBERS ON ARCH
2. DEPTH OF MEMBERS ON ARCH
3. NUMBER OF ARCHES
4. HOW SPREAD APART ARCHES ARE
5. HEIGHT OF ARCH

ITERATIVE SKETCHES

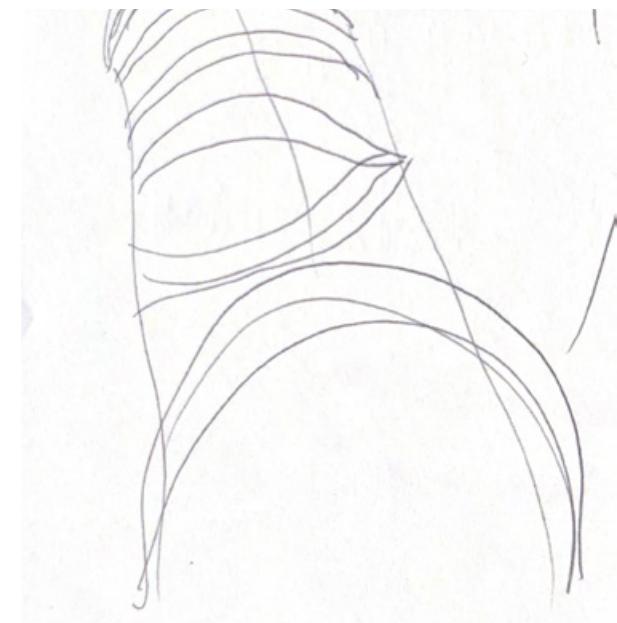


3. NUMBER OF ARCHES

4. HOW SPREAD APART ARCHES ARE



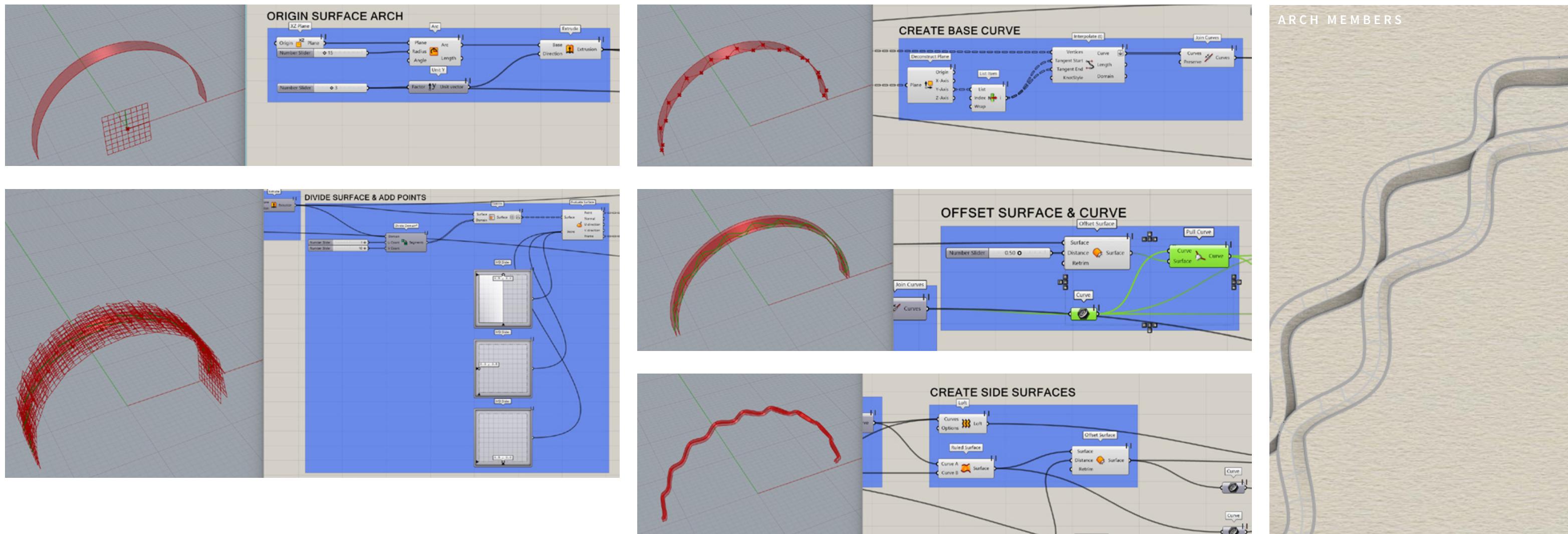
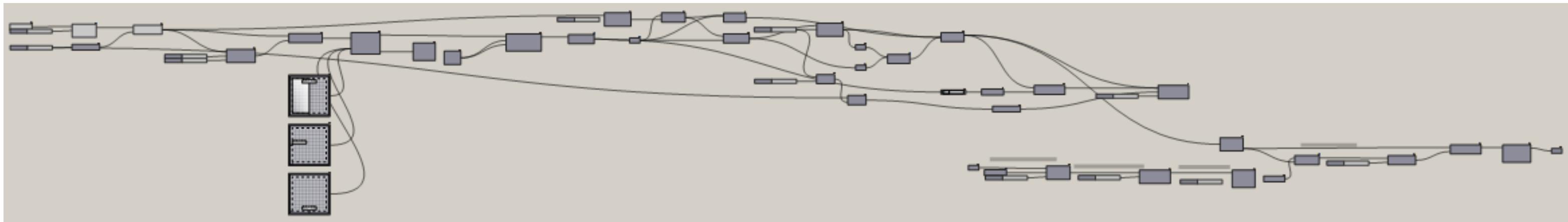
5. HEIGHT OF ARCH



ASSIGN 03

02 GRASSHOPPER | DIGITAL MODEL

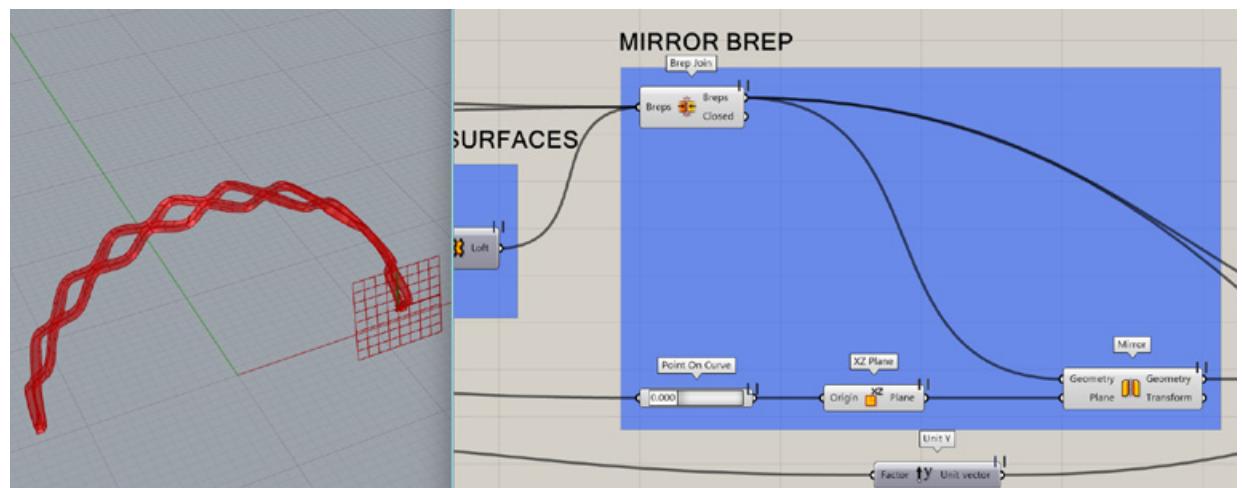
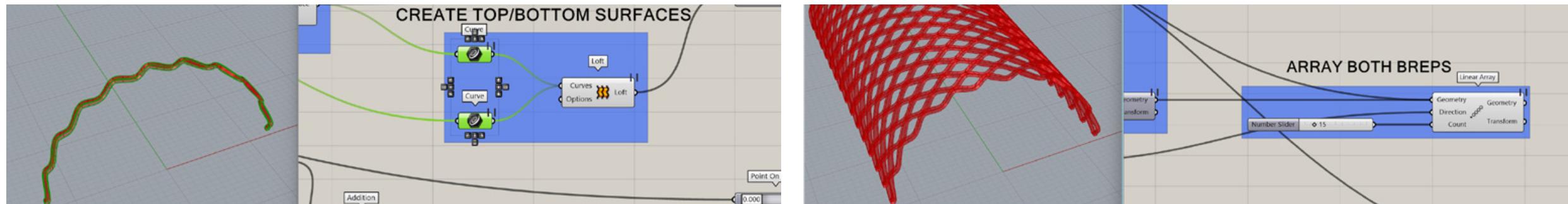
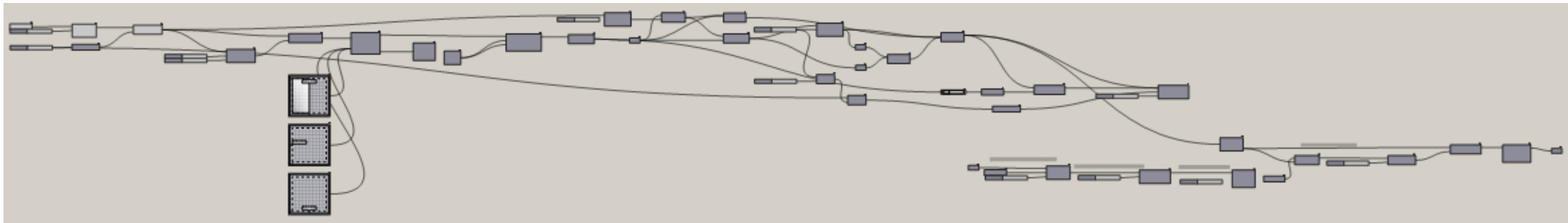
MODEL CREATION IN RHINO Pavillion Structure



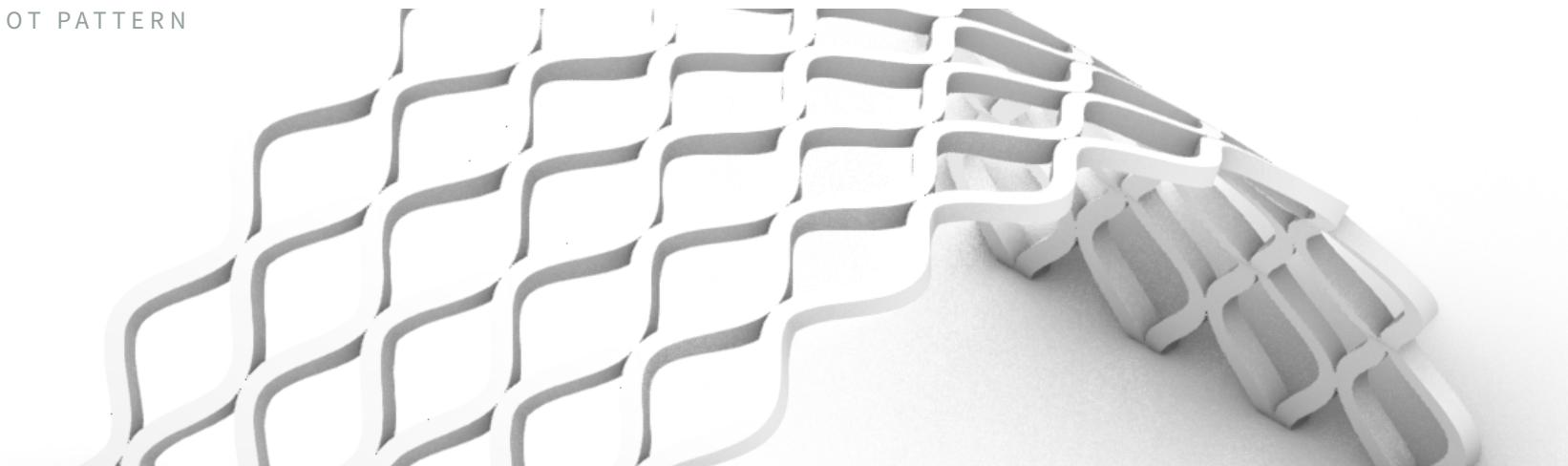
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03 GRASSHOPPER 2 | DIGITAL MODEL

MODEL CREATION IN RHINO Pavillion Structure



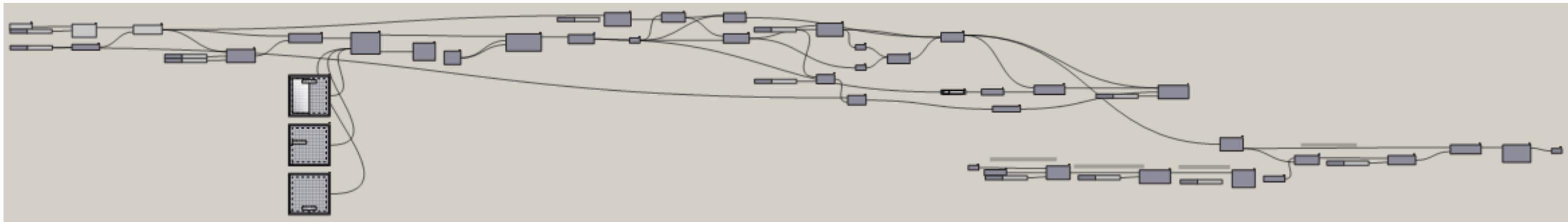
PAVILLION KNOT PATTERN



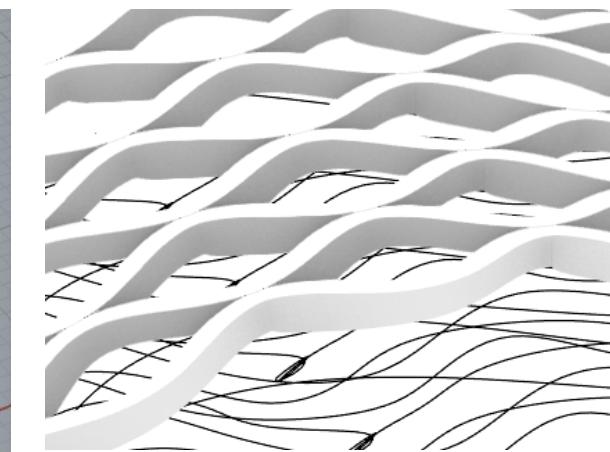
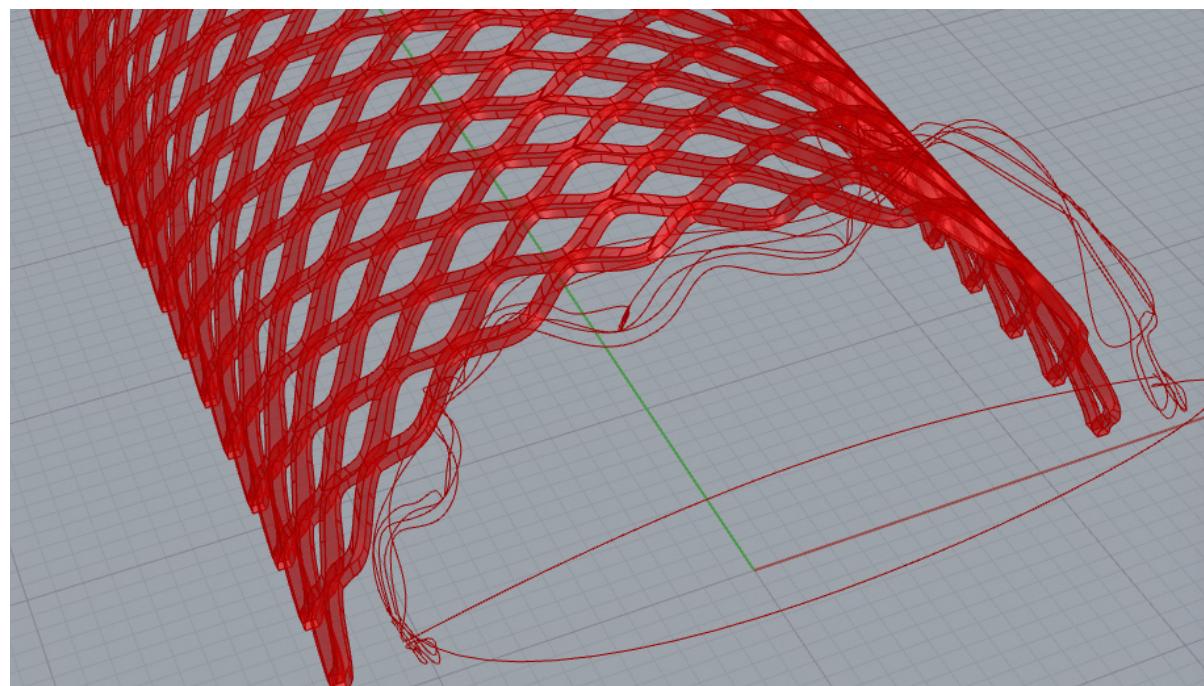
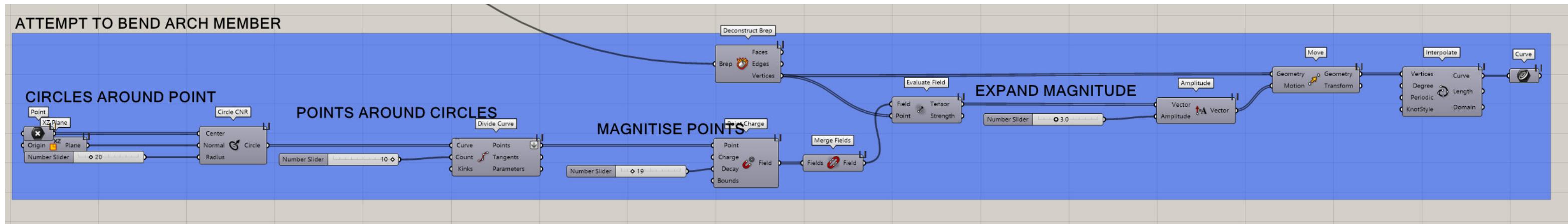
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04 GRASSHOPPER | DIGITAL MODEL

POTENTIAL TO MOVE FURTHER Pavillion Structure



ATTEMPT TO BEND ARCH MEMBER



CONTINUATION

- Adding curving singled out arch's, once or arrayed
- **Goal** was to have an arch member curve out of the pattern for potential seating
- Most successful attempt
 - Magnitize points from assign 02
- Other attempts
 - Bend, point, & spatial deform components

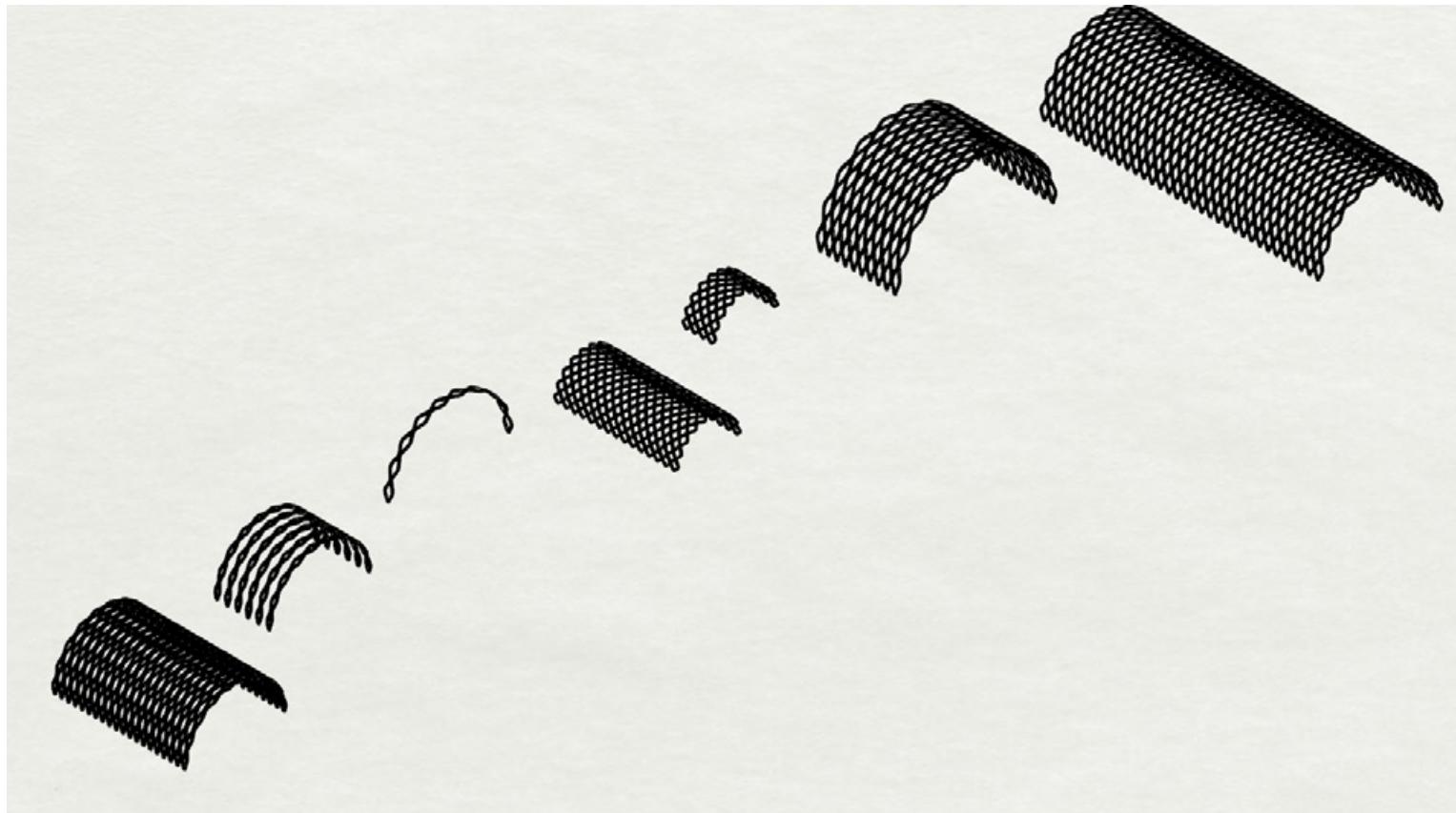
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05 PERSPECTIVES

DIGITAL MODEL

INITIAL IDEAS DERIVED FROM ASPEN TREE

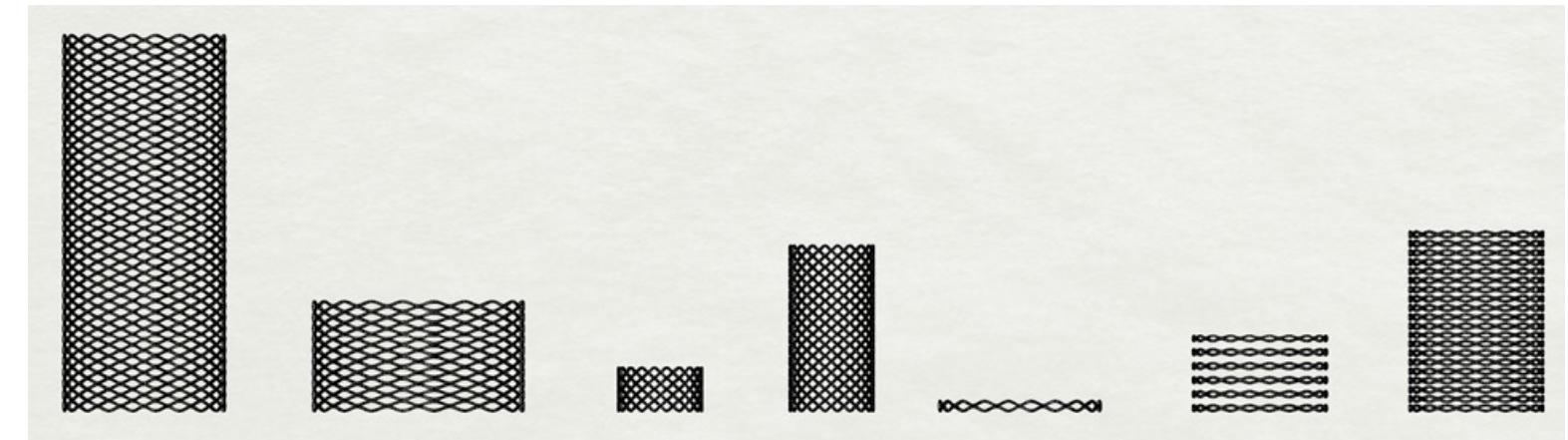
DESIGN VARIATIONS



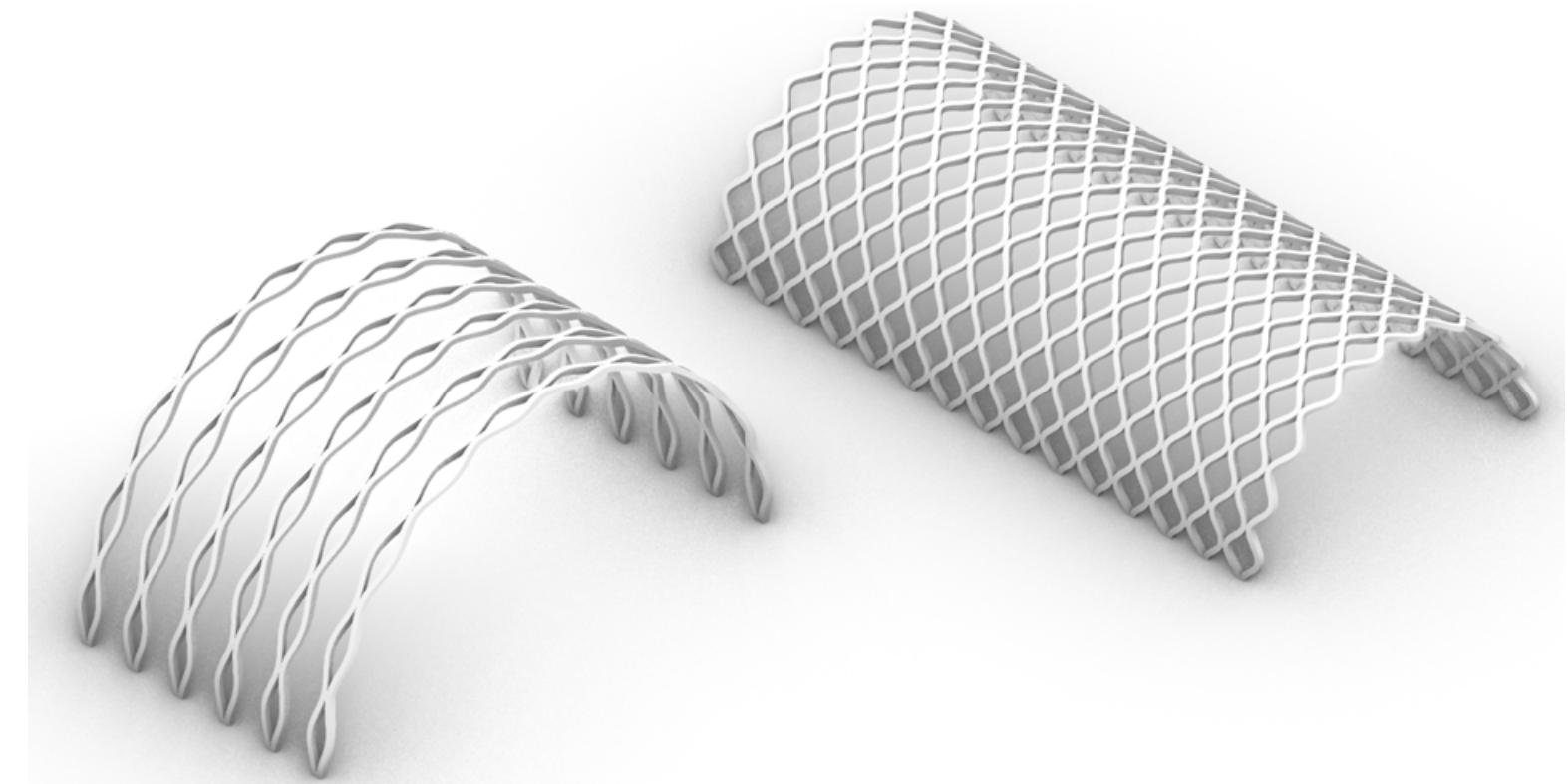
PARAMETERS

1. WIDTH OF MEMBERS ON ARCH
2. DEPTH OF MEMBERS ON ARCH
3. NUMBER OF ARCHES
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VARIATIONS PLAN VIEW



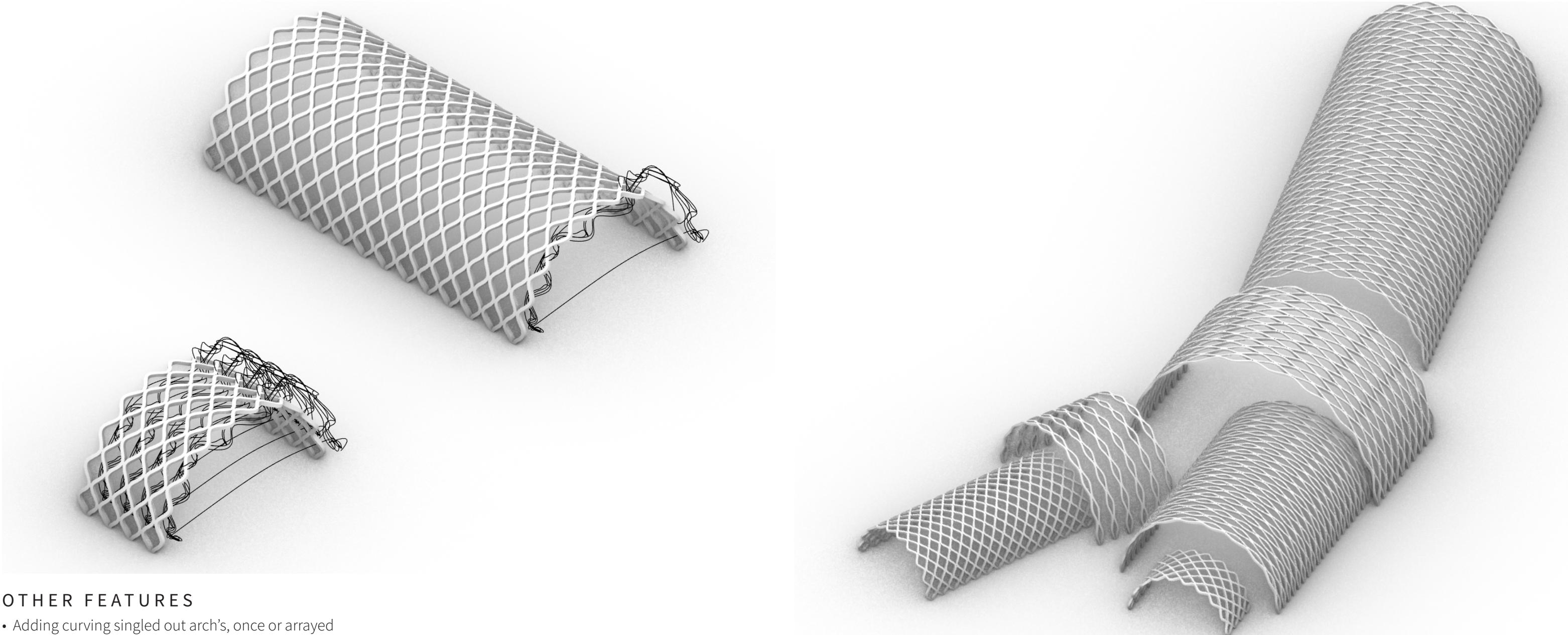
ENLARGED SELECT VARIATIONS



ASSIGN 03

06 PERSPECTIVES

DIGITAL MODEL



OTHER FEATURES

- Adding curving singled out arch's, once or arrayed
- Opportunity to connect different versions of pattern to expand pavillion

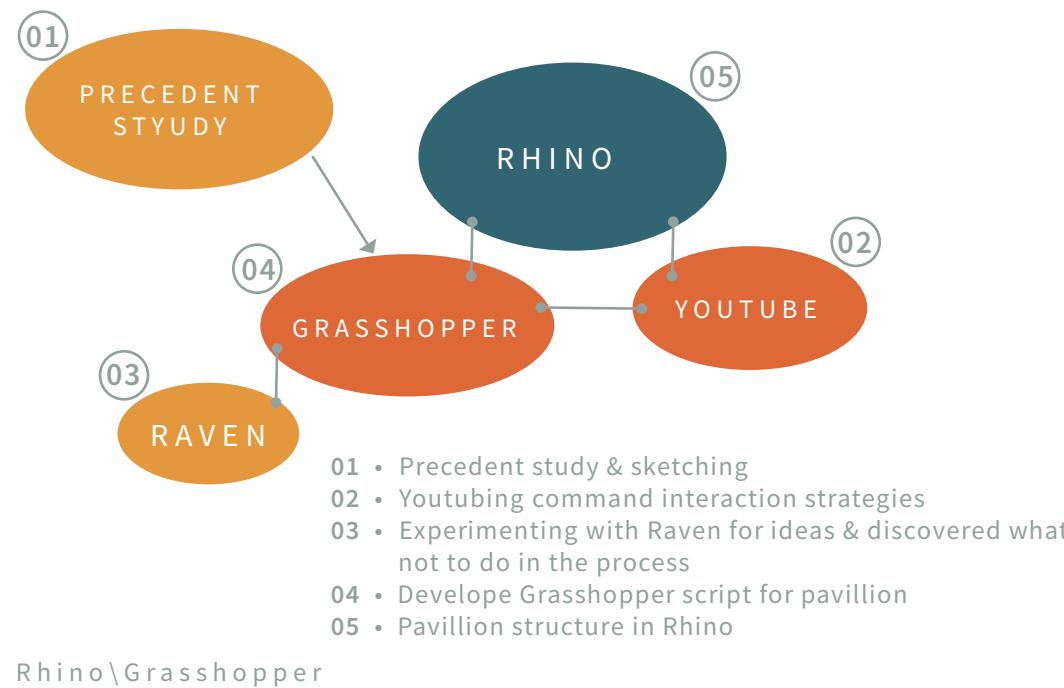


ASSIGN 03

07 REFLECTION

DIGITAL MODEL

WORK FLOW DIAGRAM



SUMMARY

- STEP 01:
Sketch and get inspiration for what to create.
- STEP 02:
Research precedents for the design & similar Grasshopper scripts.
- STEP 03:
Experiment & develop Grasshopper script.
- STEP 04:
Contemplate future iterations that would further push the design.
- STEP 05:
Take screenshots of variations & reflect on process.

This workflow highlights the process of digital modeling of a parametric system. I spent a large amount of time looking at precedents and trying to find what excited me. Thinking about moving away from mimicking a knot directly on a paneled surface, I aimed to find a pattern or system that would define space not just from one plane. I could see this pavilion structure as a shading system over a pathway or as a bird watching site. In the future, it could be interesting to curve select arches for seating or other uses. Considering a shell or how climate analysis could begin to interact with the system could also advance this concept further.

Using parametric methods shifted the way I approach design by reframing geometry as something dynamic rather than fixed. Instead of modeling a single outcome, I began modeling relationships that allow the design to flex and adjust as new information emerges. Working in Grasshopper pushed me to think less about the object as a whole and more about constructing a system that could generate multiple variations with intention.