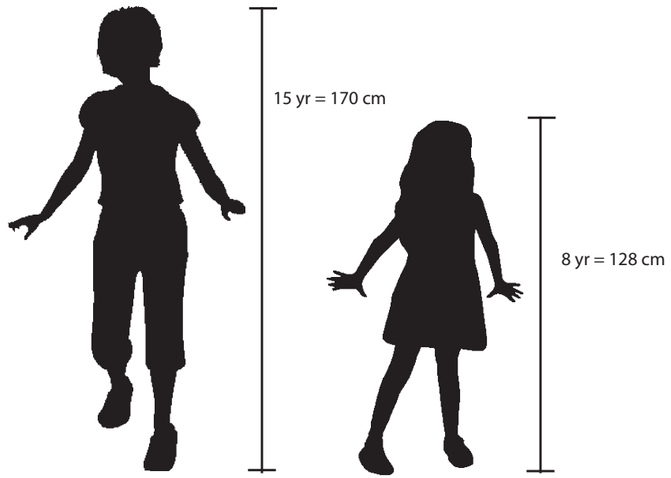
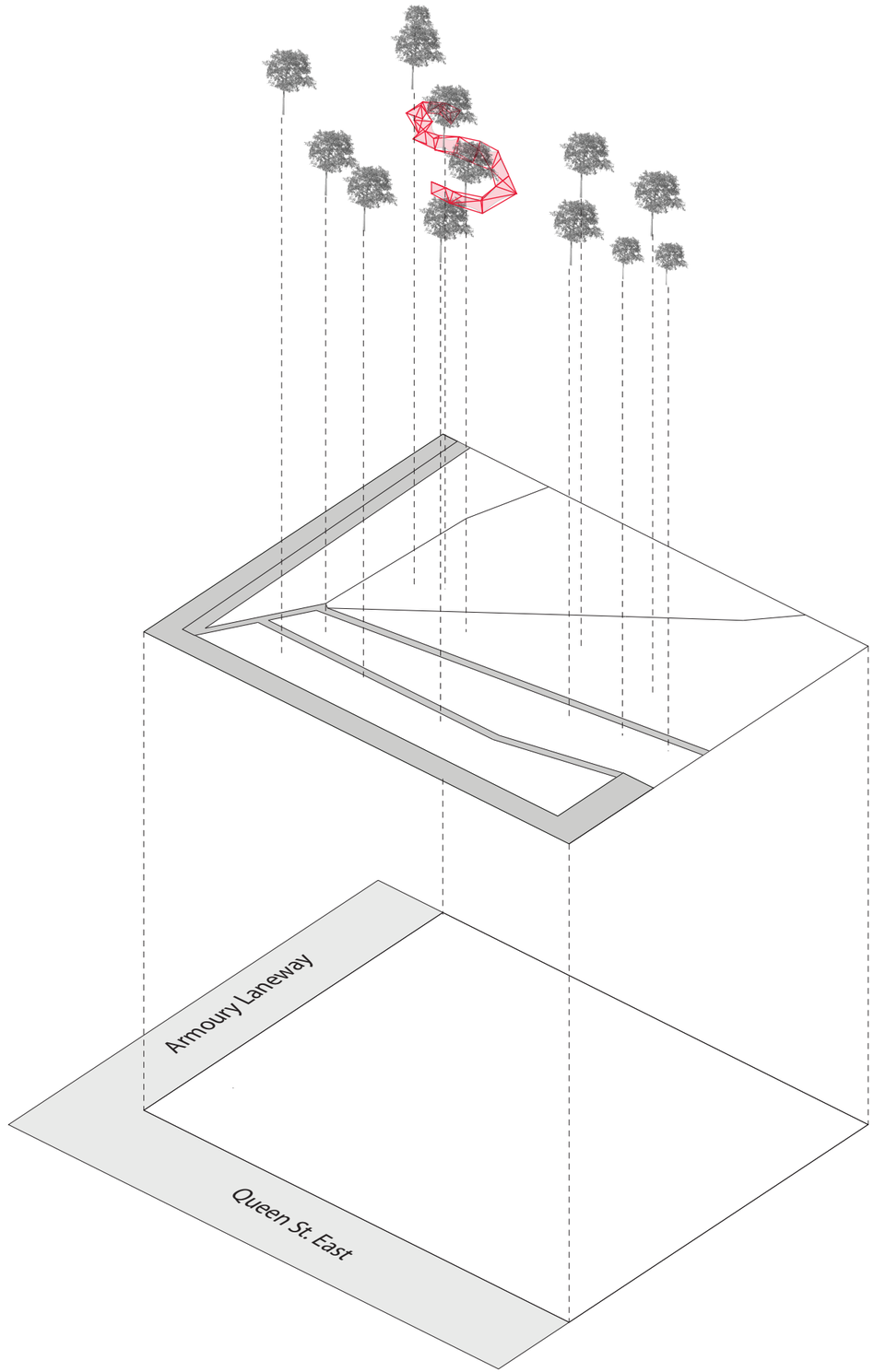
Pop-Up 2.0:

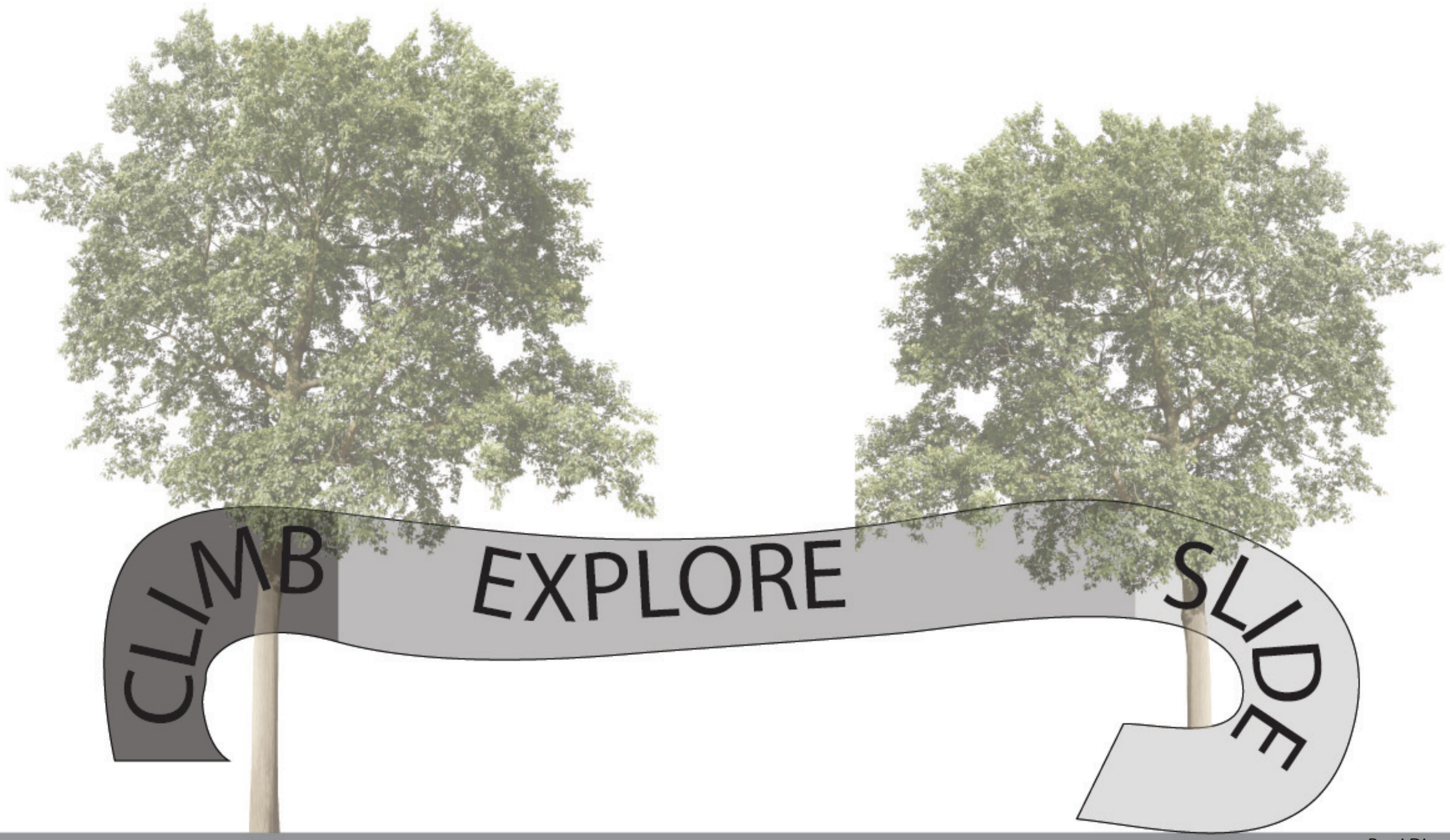
A Playground For Moss Park

by: Elizabeth Nenniger
and Laura Austin





Site Axonometric



Parti Diagram

Site Render

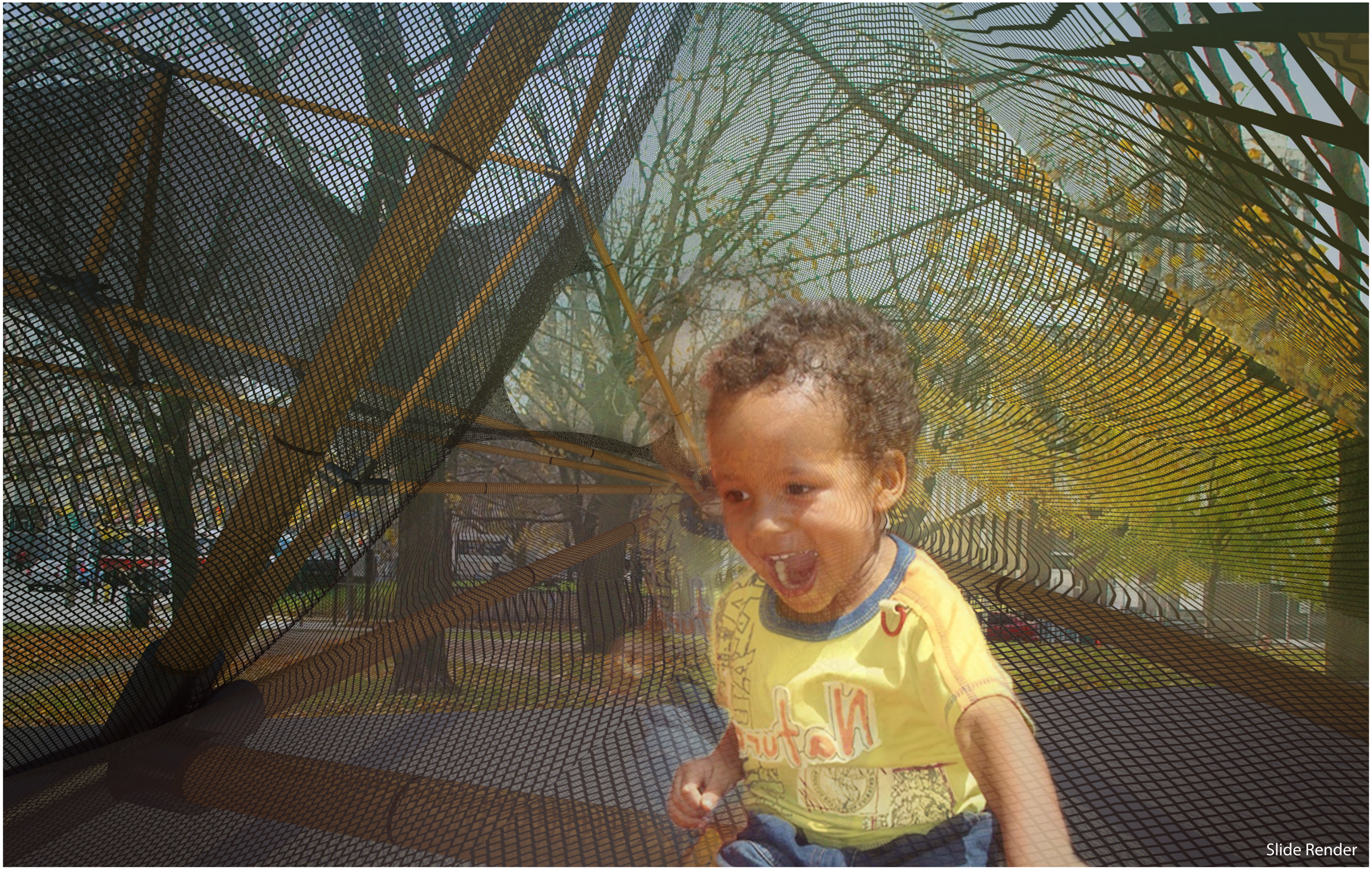
Fall Render

Summer Render

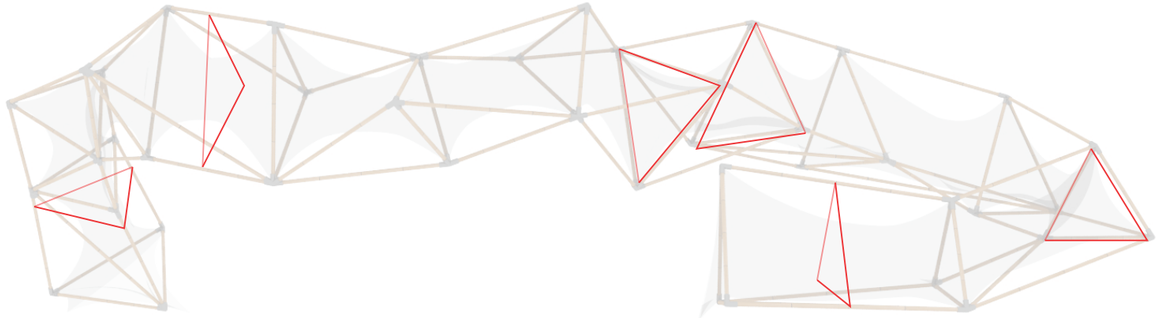
Night Render

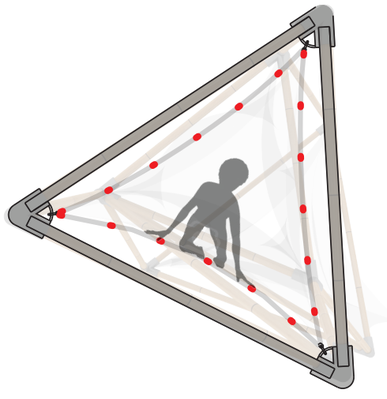
Climb Render

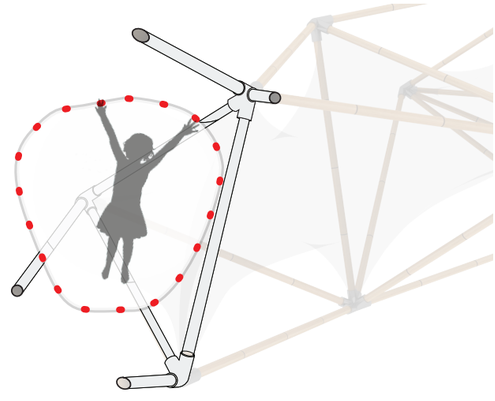

Explore Render

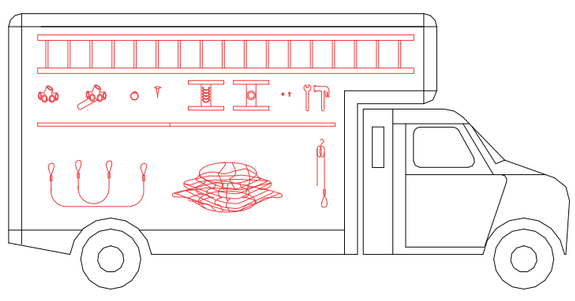


Slide Render

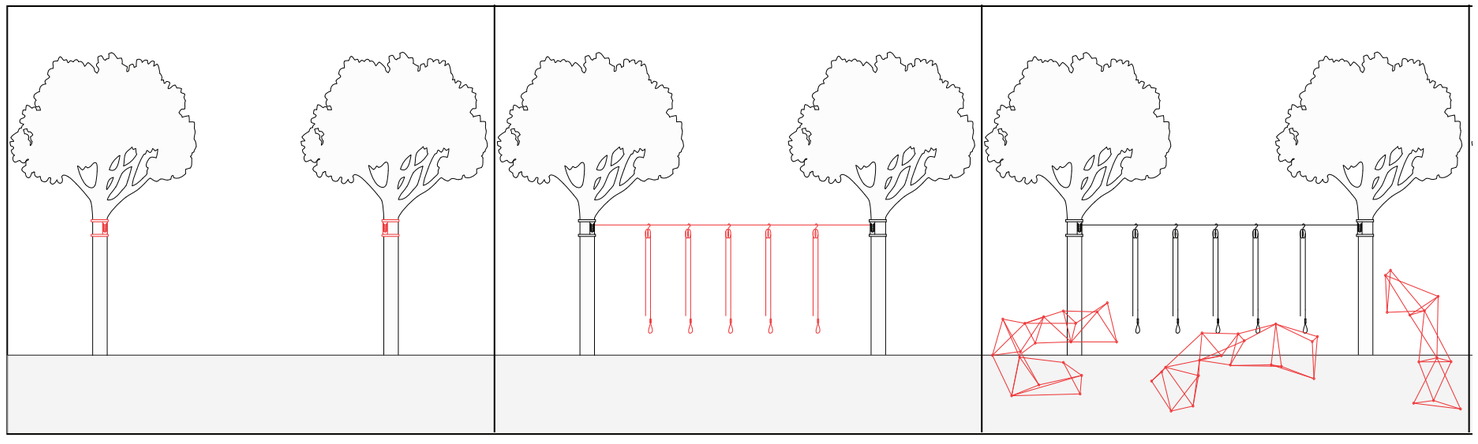


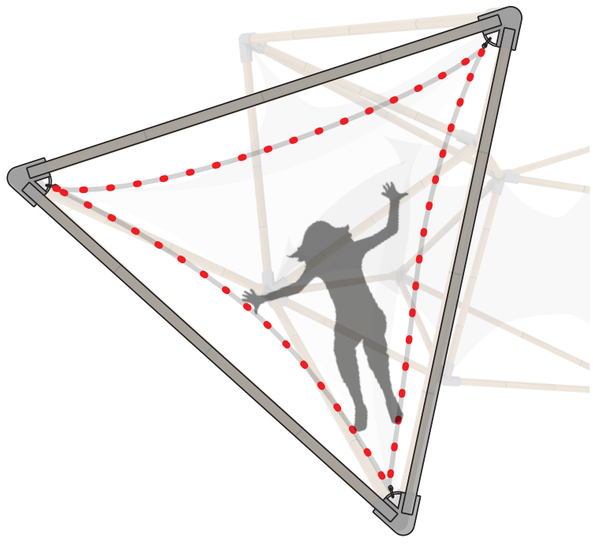


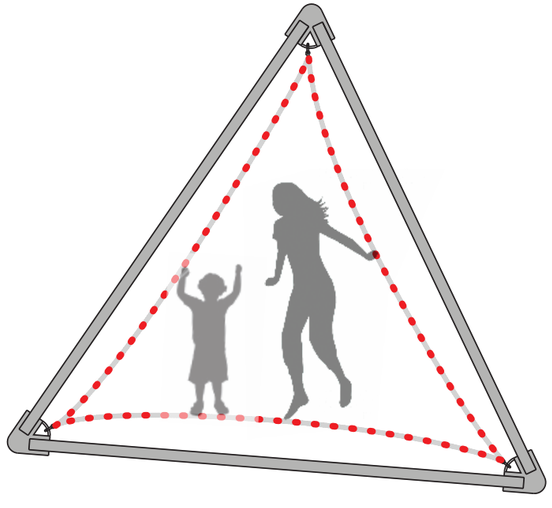


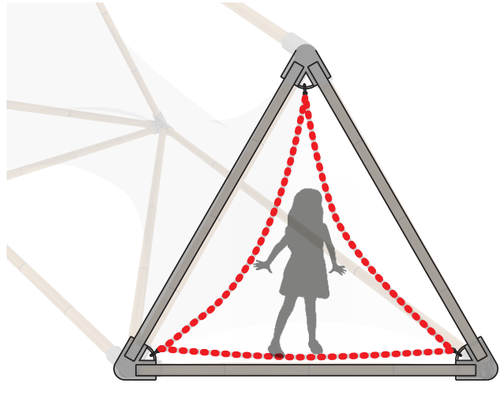


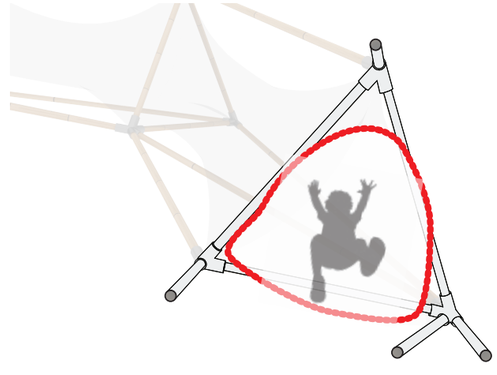
Standard 10’ Truck Size



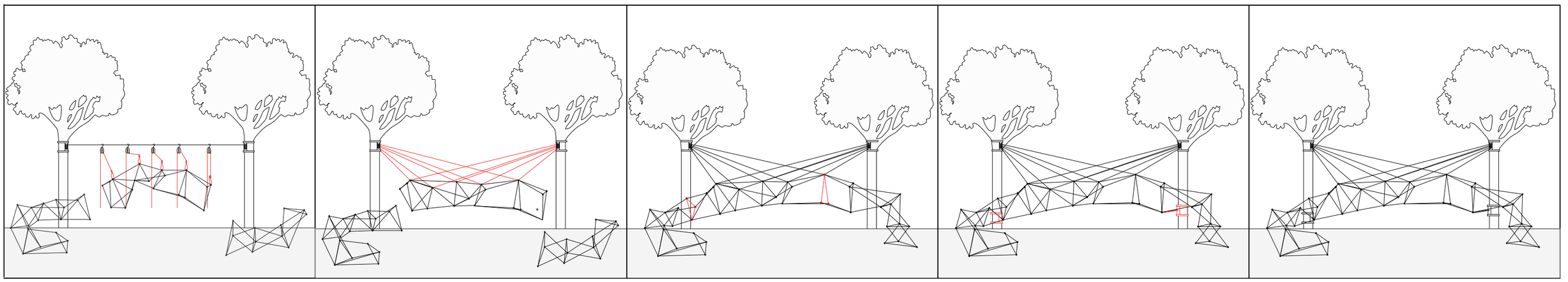




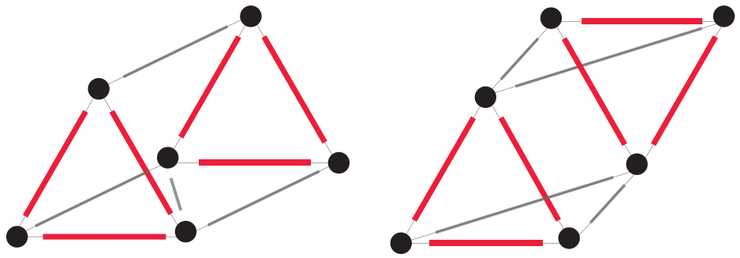




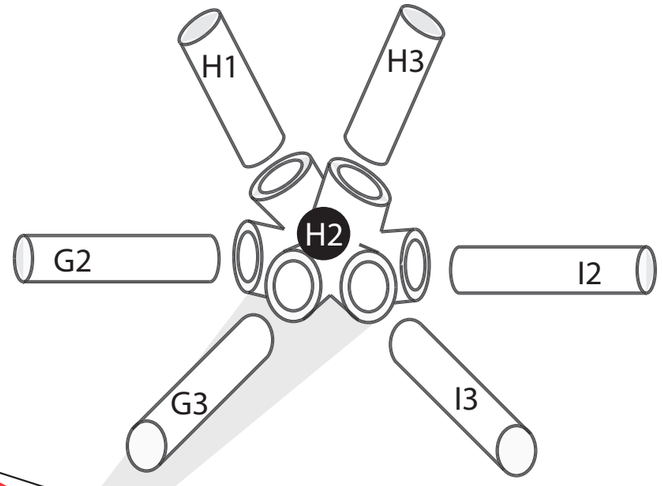
1:25
Sectional Series

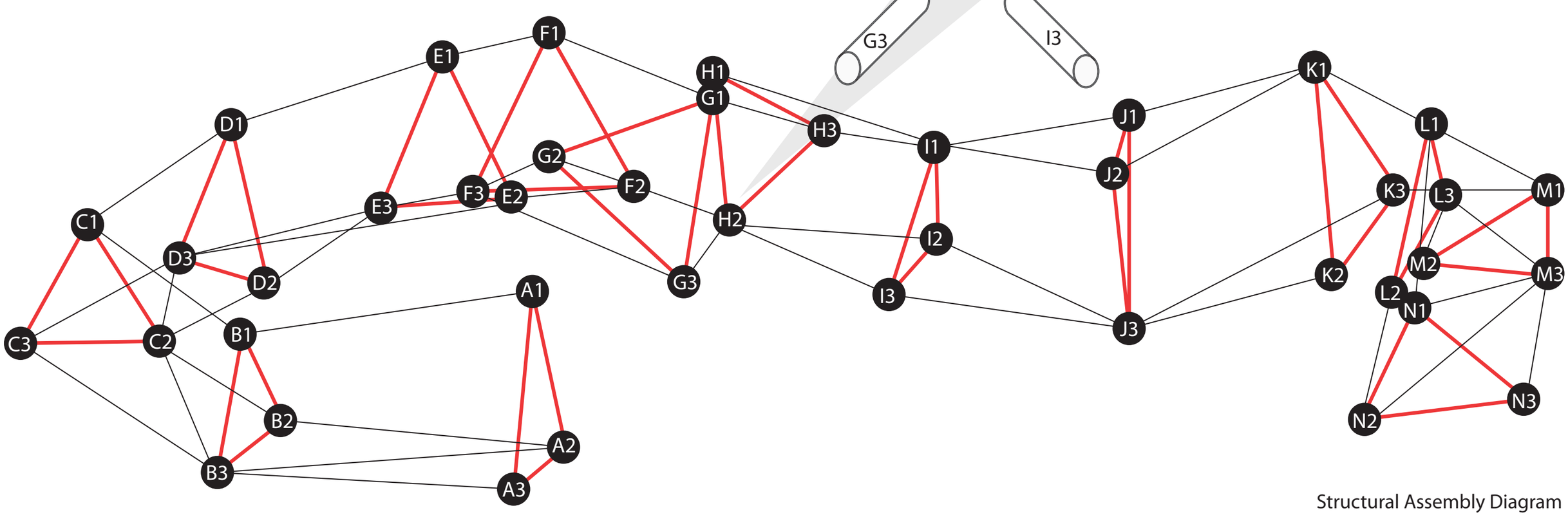


Views of Assembly

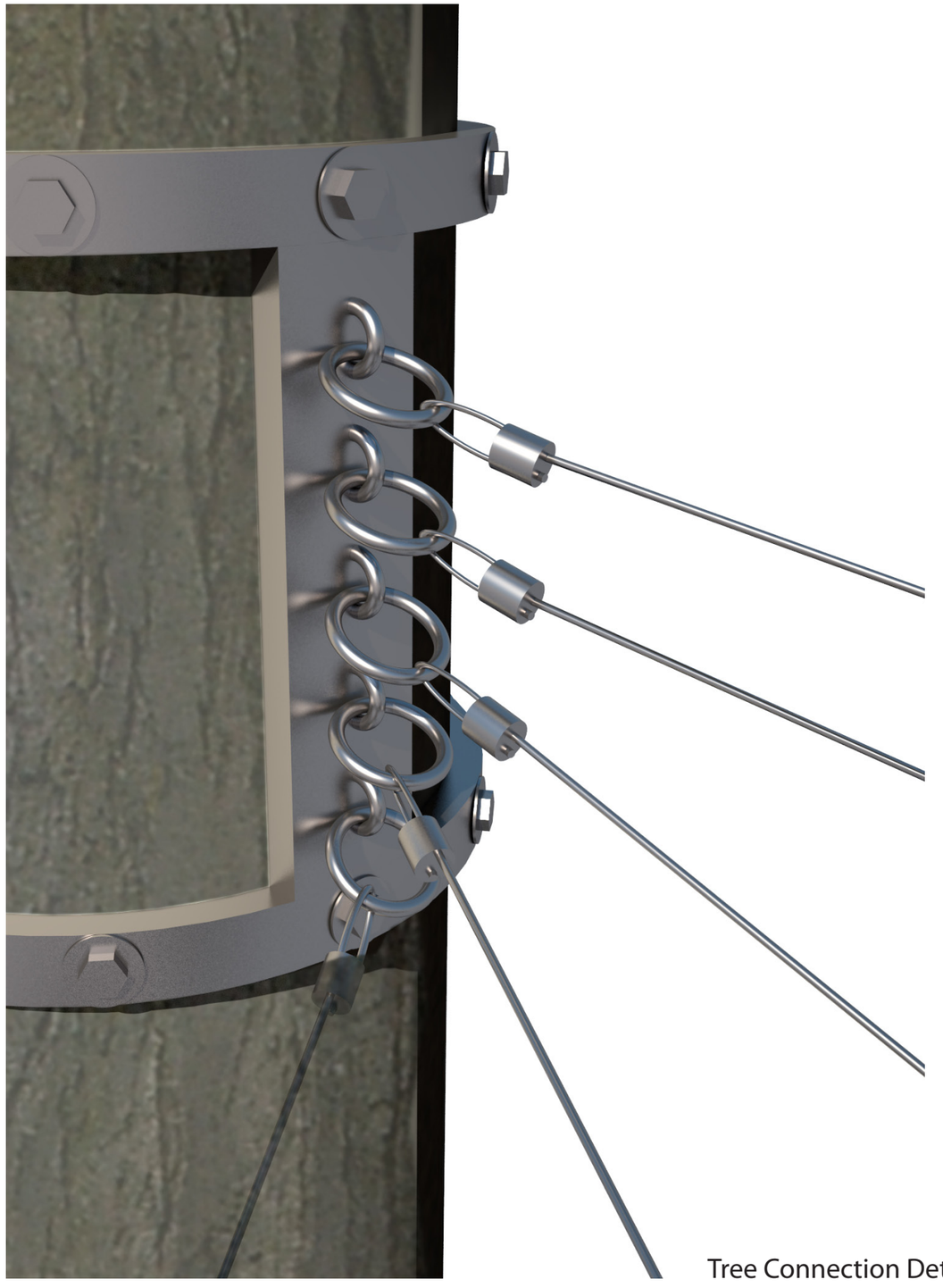


Connection Types

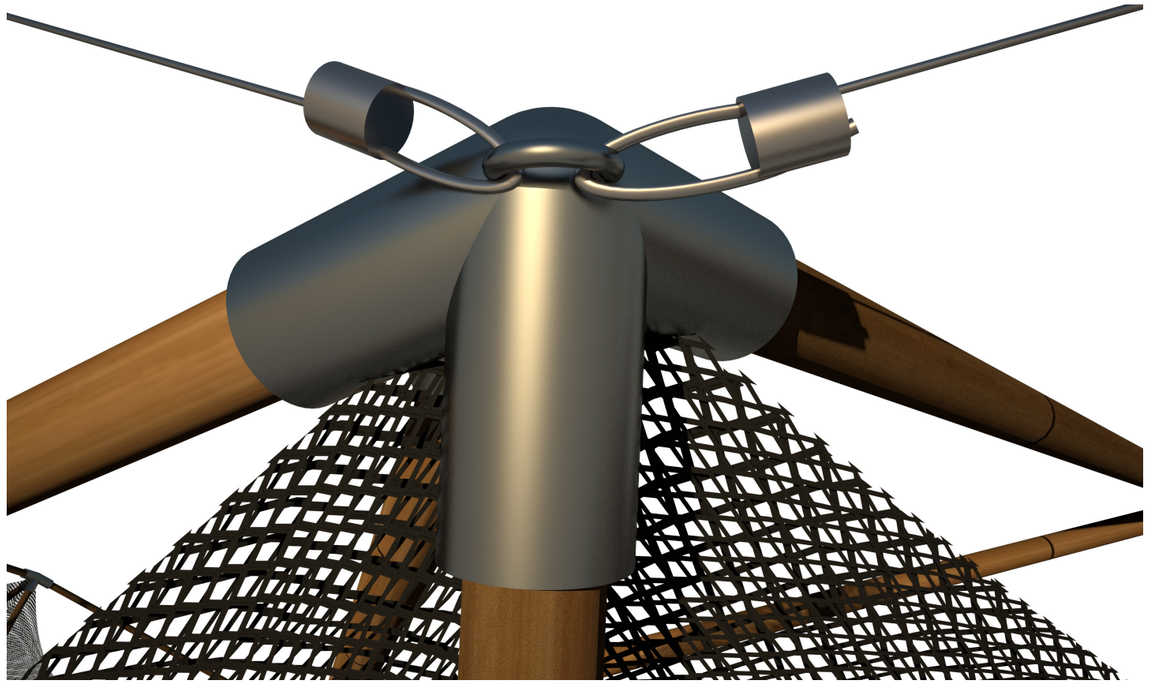




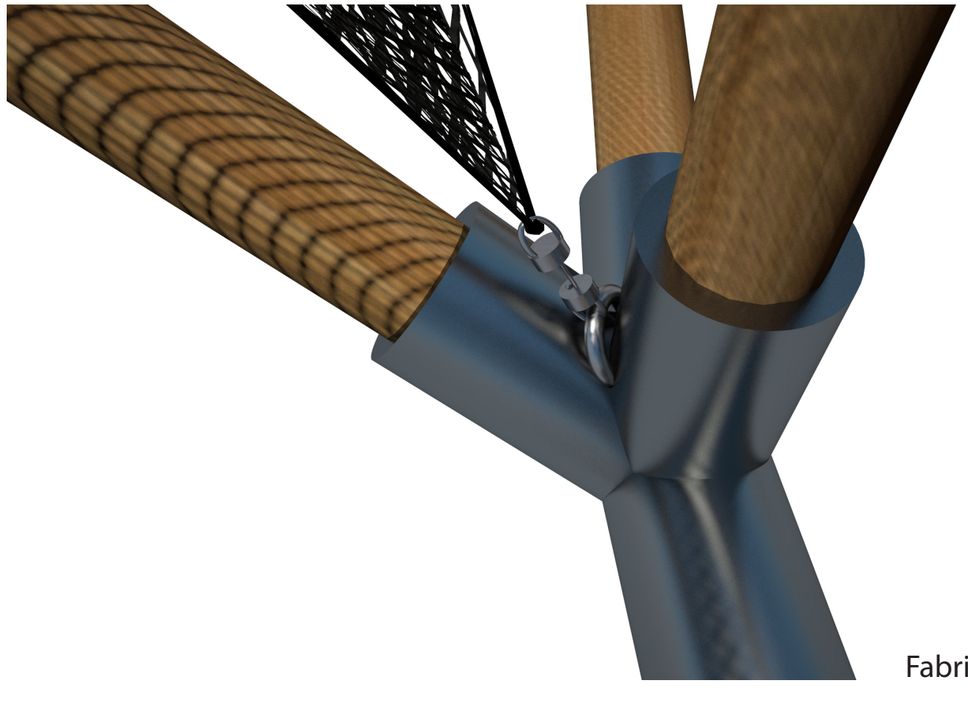
Structural Assembly Diagram



Tree Connection Detail

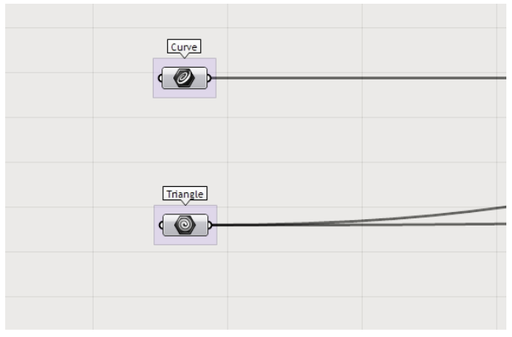


Joint to Tension Cable Connection Detail

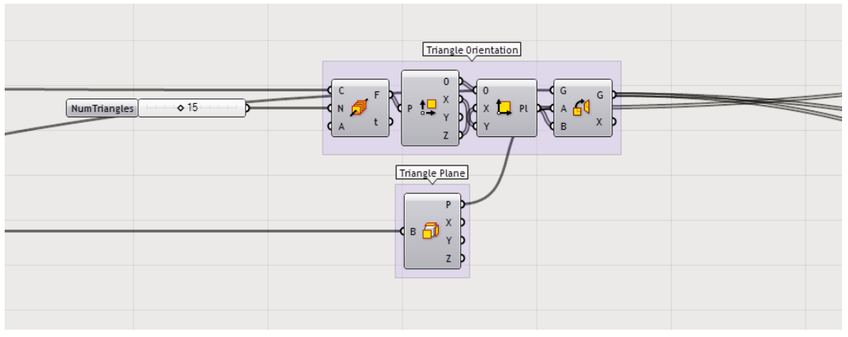


Fabric Connection Detail

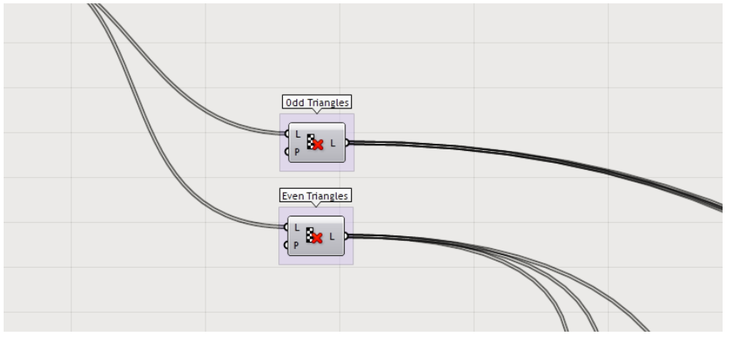
Computational Logic:



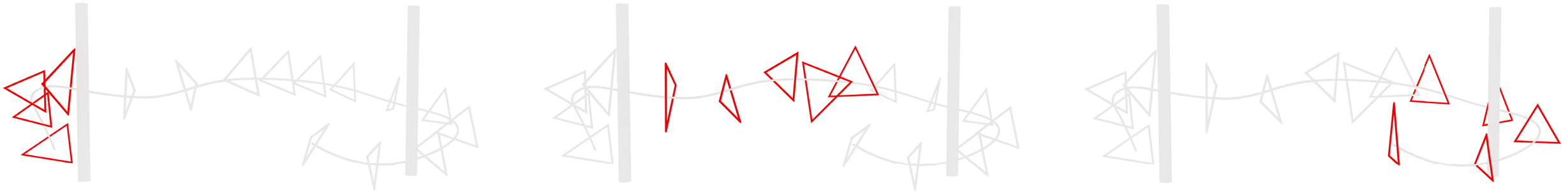
Select curve
Select triangle

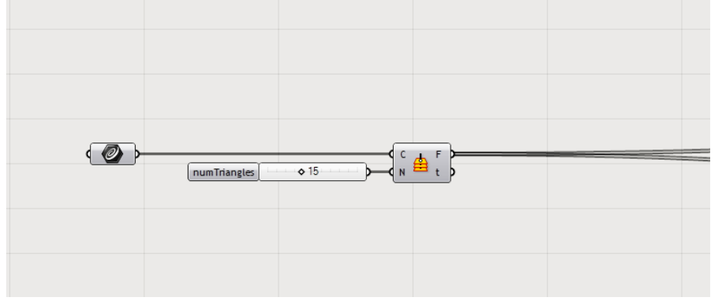


Divide curve into segments
Create and orient planes at each division point
Array triangles along curve based on segments & planes

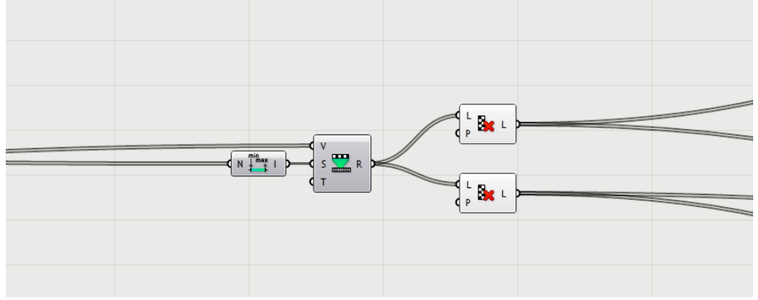


Isolate alternating triangles into separate lists

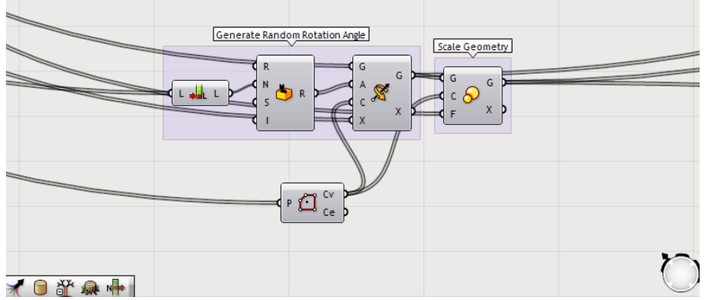




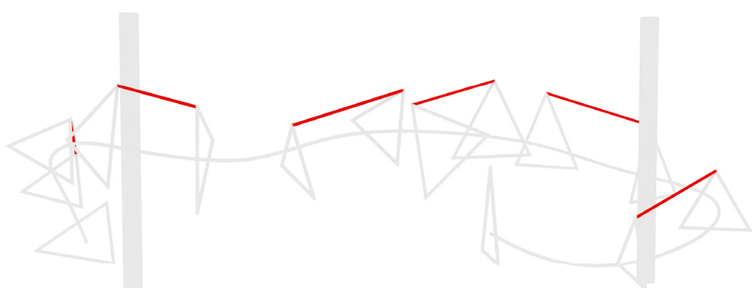
Align the orientation plane horizontally along the axis for the slide & climb zones

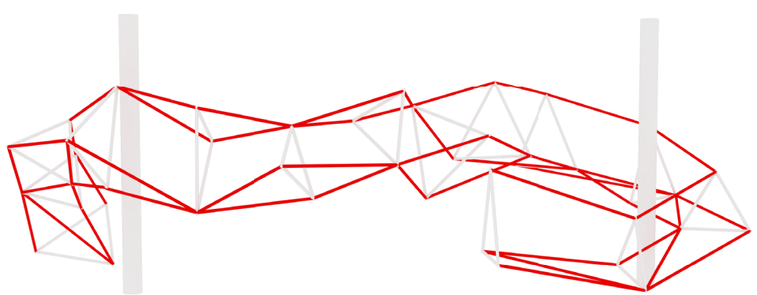


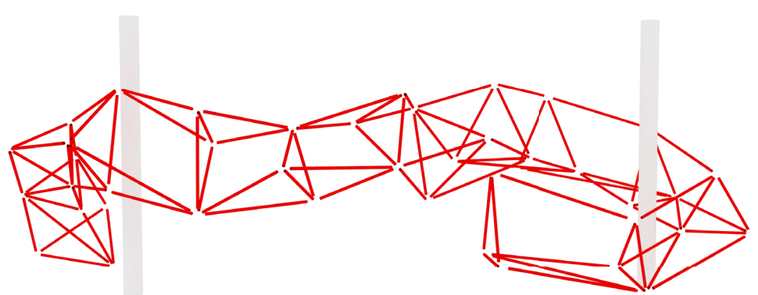
Isolate the climb, explore and slide zones
Set a max and min for the scale size and rotation angle

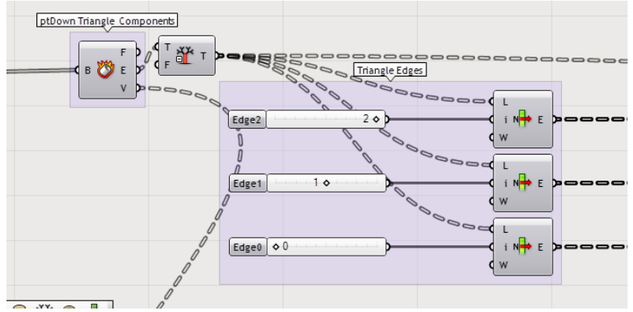


Adjust the size and rotation of the triangles

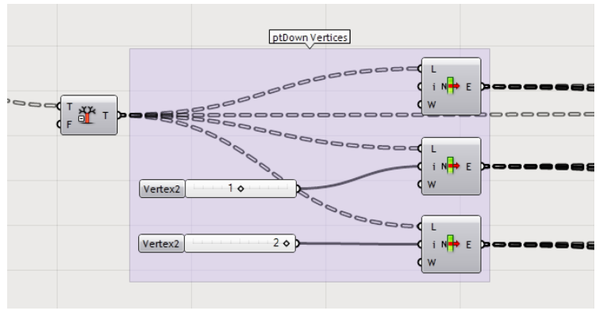


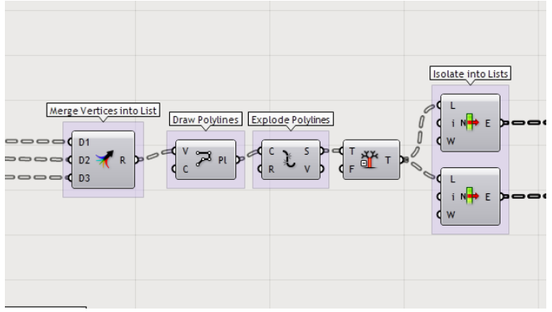




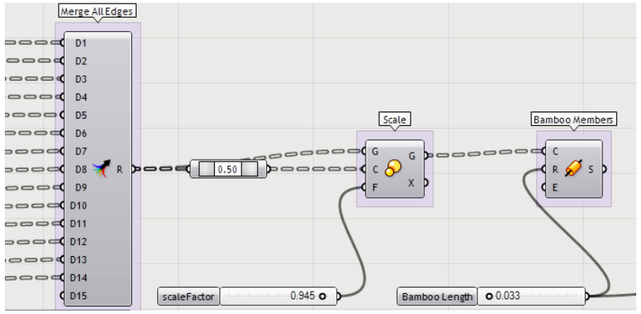


Separate consecutive triangles into two lists
Decompose triangles into edges, vertices and faces

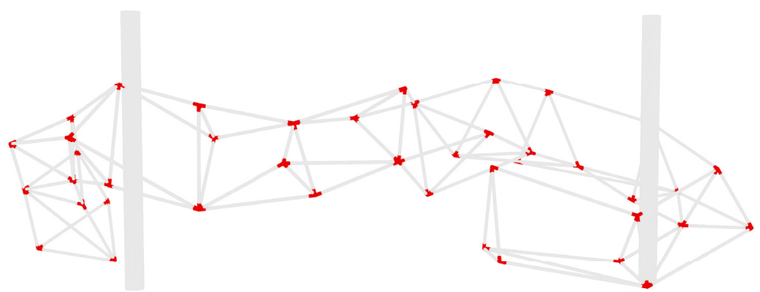


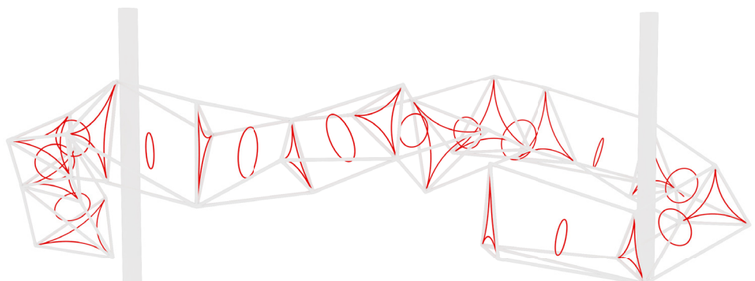


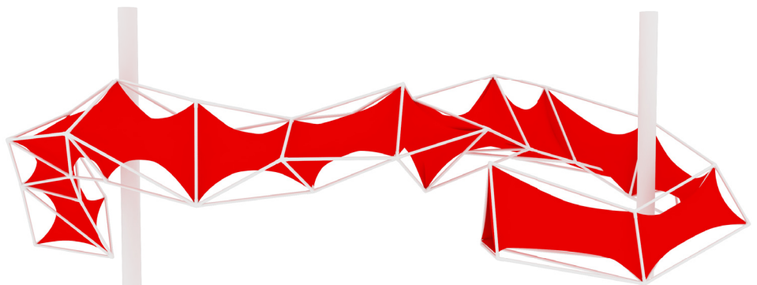
Merge the vertices that will be connected into a list
Draw a polyline connecting the vertices
Explode the polyline and organize the lines into lists according to index

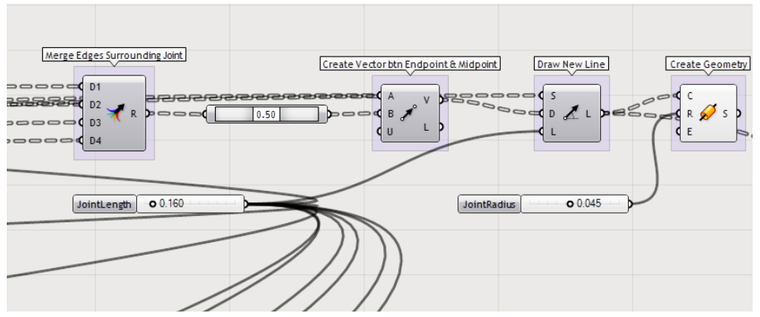


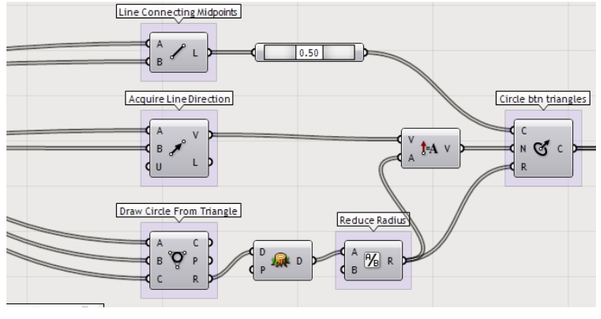
Merge all triangle edges and connections into a list
Scale the lines down with the midpoint as the origin
Pipe the list of curves

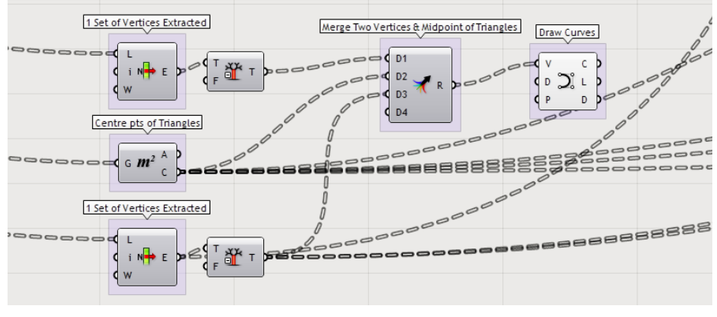


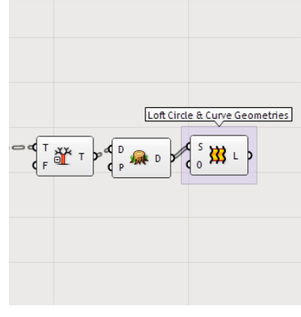










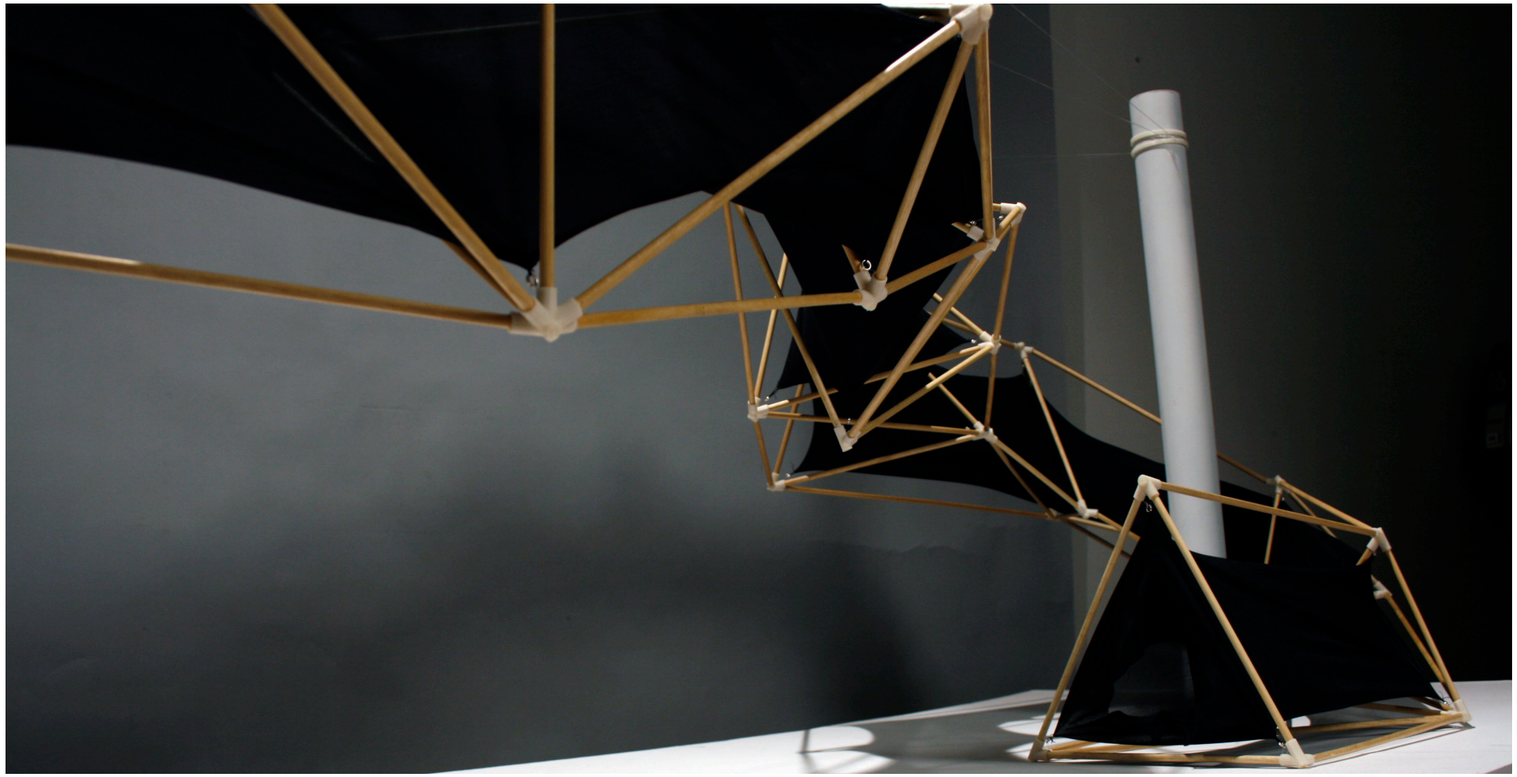


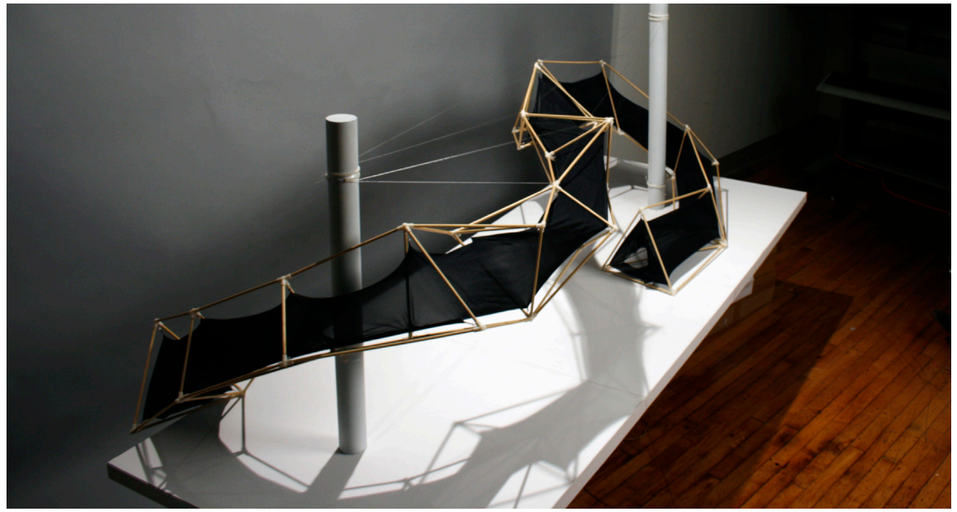
Merge all lines that converge at a vertex
Find midpoints of each line
Get the direction of the line
Redraw the line at a set size with the origin at the vertex
Pipe the curves

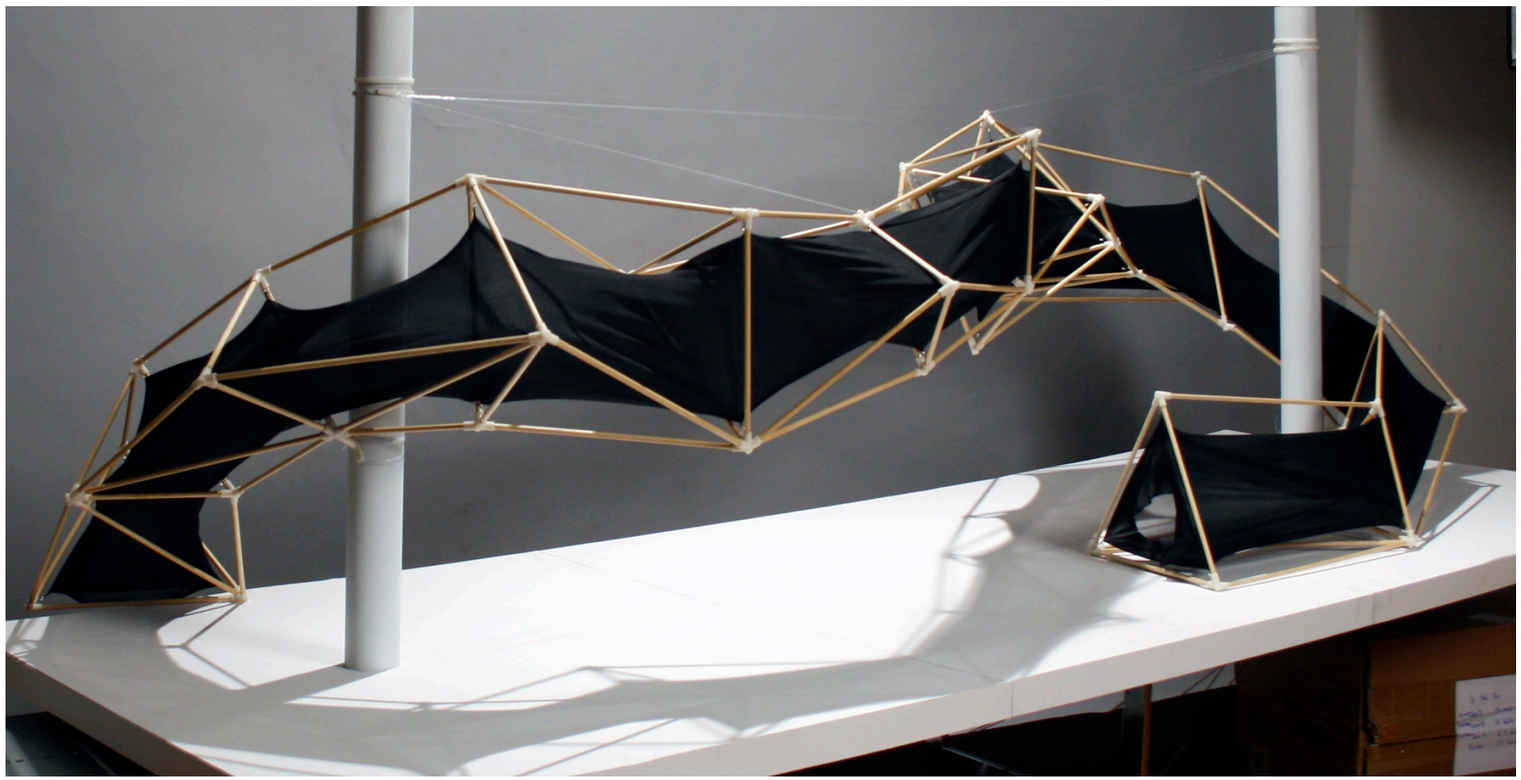
Get centre point of triangles
Draw a line from the centre point of a triangle to the one following it
Get the midpoint and direction of the line
Draw a circle at the midpoint of the line with a radius related to the size of the triangle

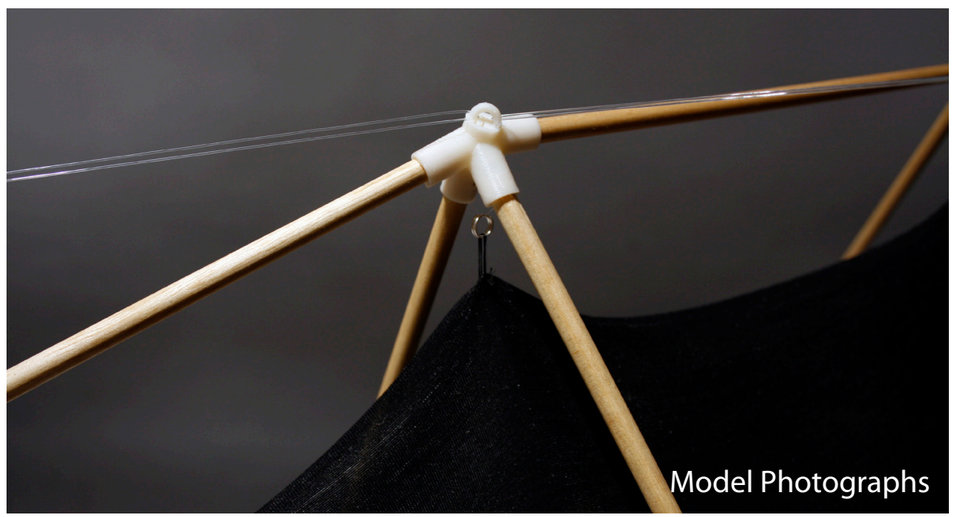
Merge two vertices and the centre point of the triangle into a list
Draw a curve based on these 3 points, using the midpoint as the second input
Continue for each combination of vertices
Join the curves into a closed curve

Loft the closed curve geometries with the circle geometries to create the fabric









Model Photographs