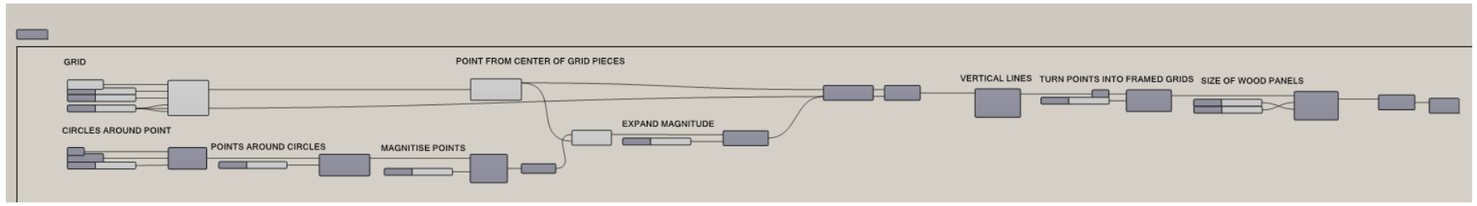
ASSIGN 02 | LINKING PROGRAMS

KATIE RAGSDALE

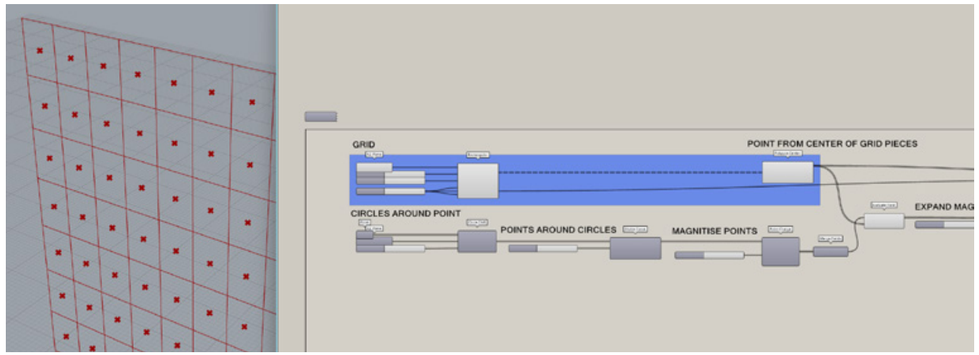
ASSIGN 02

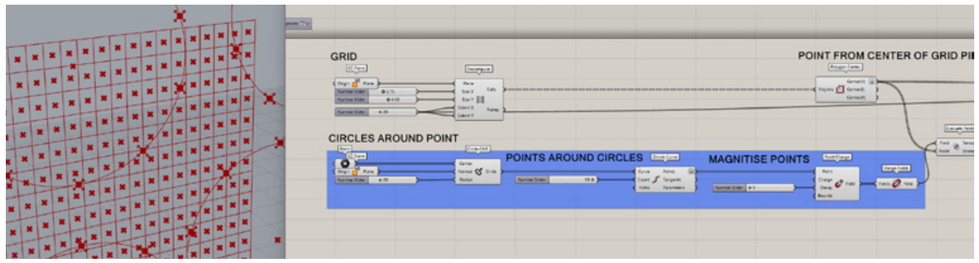
01 GRASSHOPPER | LINKING PROGRAMS

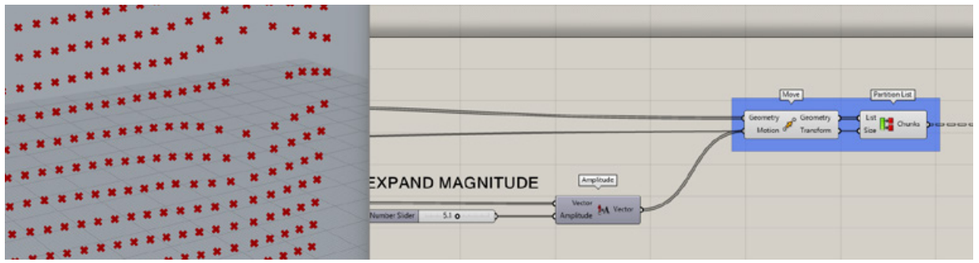
MODEL CREATION IN RHINO Paneled Screen for Shading



Parametric Geometry

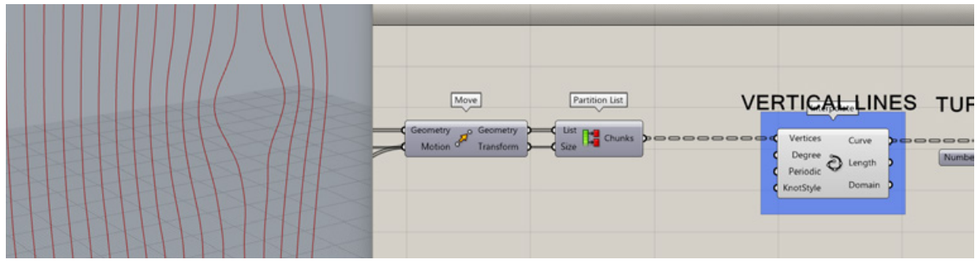


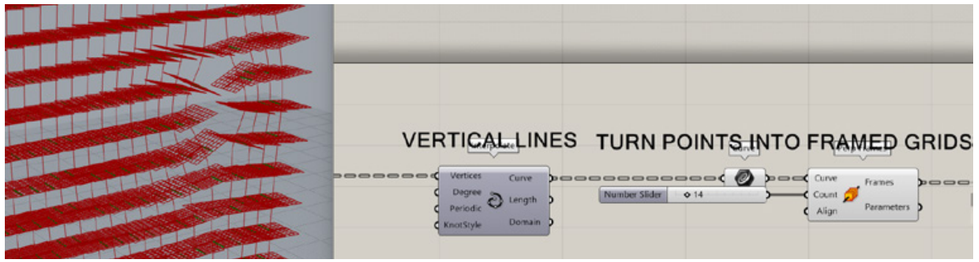


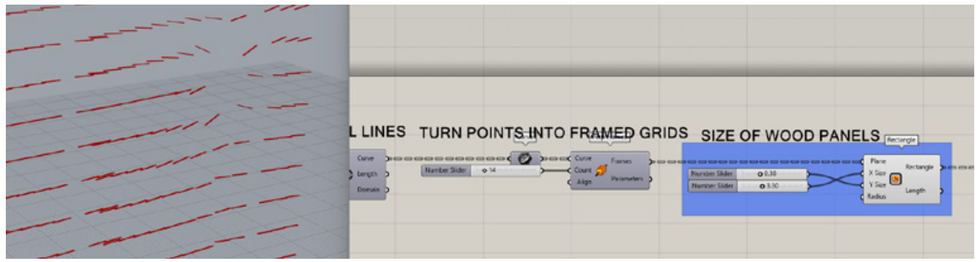


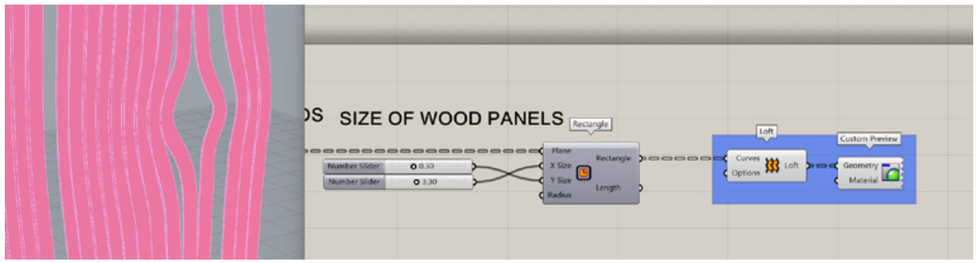
STEP 01:
Develop a parametric idea: Create a paneled screen to use for shaded area or bird watching sanctuary & use a wood pattern.

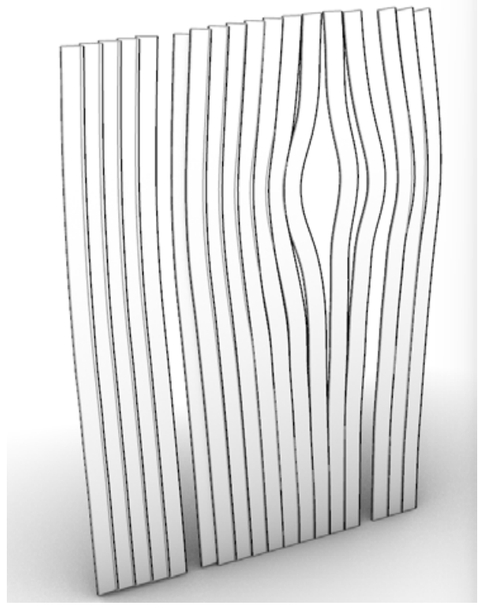
STEP 02:
Open Grasshopper inside Rhino and create a file ready to bring into Revit.







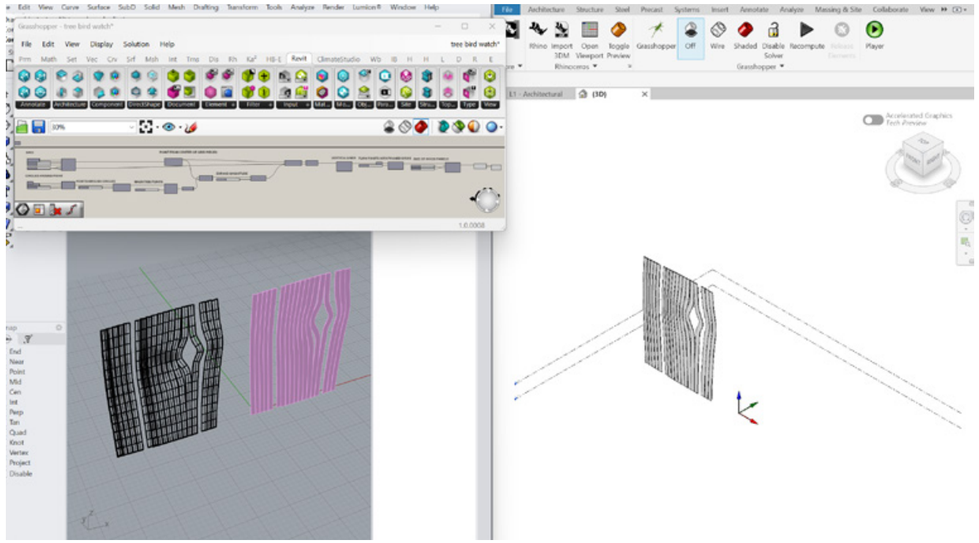




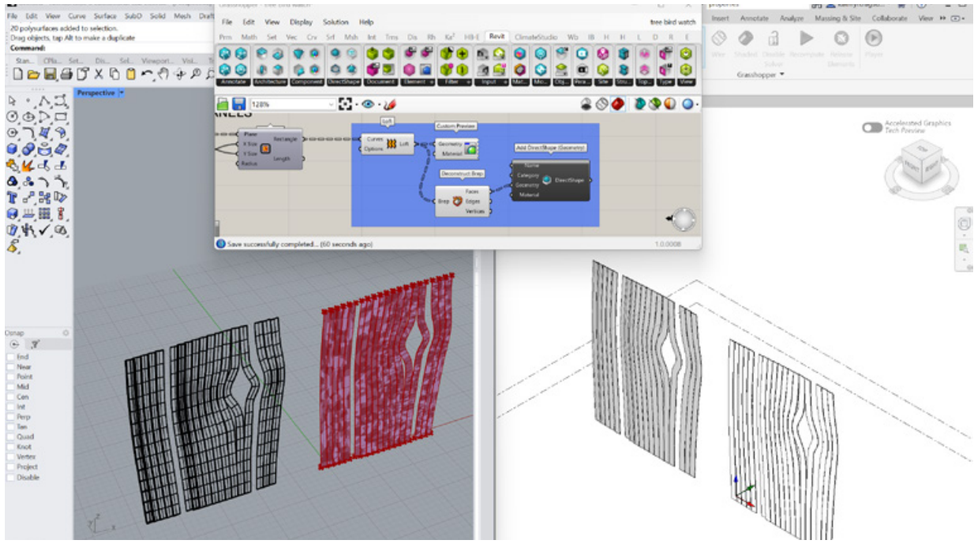
ASSIGN 02

02 RHINO IN REVIT | LINKING PROGRAMS

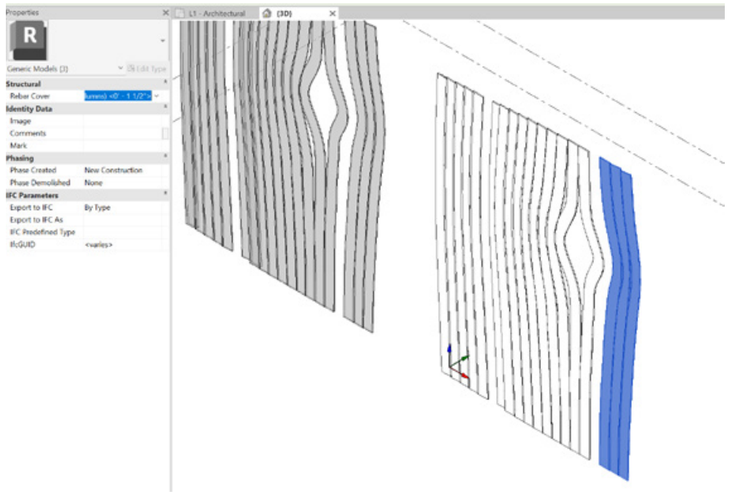
DATA EXCHANGE WITH REVIT



Import Geometry using Revit Inside Revit



Translate Geometry into Revit Element



Translate Geometry into Revit Element

STEP 03:
Once in Revit, open Rhino.Inside.Revit. Go to a 3D view and edit VG. Turn on Internal origin point under site.

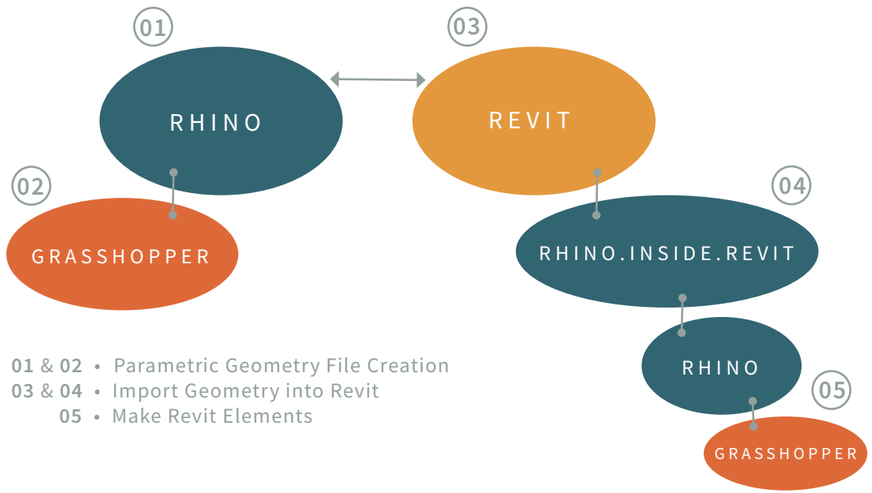
STEP 04:
Open a Rhino file and open the same Grasshopper file created in step 02.

STEP 05:
Use Revit tools inside Grasshopper (opened with Rhino.Inside.Revit) to develop Revit elements:
Transformed Rhino Geometry Slats into framing elements that can individually be selected in Revit.

ASSIGN 02

03 REFLECTION | LINKING PROGRAMS

WORK FLOW DIAGRAM



01 & **02** • Parametric Geometry File Creation
03 & **04** • Import Geometry into Revit
05 • Make Revit Elements

Rhino\Grasshopper - Revit

SUMMARY

STEP 01:
Develop a parametric idea: Create a paneled screen to use for shaded area or bird watching sanctuary & use a wood pattern.

STEP 02:
Open Grasshopper inside Rhino and create a file ready to bring into Revit.

STEP 03:
Once in Revit, open Rhino.Inside.Revit. Go to a 3D view and edit VG. Turn on Internal origin point under site.

STEP 04:
Open a Rhino file and open the same Grasshopper file created in step 02.

STEP 05:
Use Revit tools inside Grasshopper (opened with Rhino.Inside.Revit) to develop Revit elements: Transformed Rhino Geometry Slats into framing elements that can individually be selected in Revit.

This workflow highlights the process of linking Rhino and Grasshopper with Revit through Rhino.Inside.Revit. I first modeled a parametric geometry in Grasshopper, providing more control over flexable parameters to replicate tree bark. With Rhino.Inside.Revit this geometry was imported and translated into Revit elements. The integration showed how early parametric experimentation can go directly into Revit without loss of efficiency.

The process ultimately improved the way I view modification of building elements. The main challenges were ensuring that parameter updates in Grasshopper were correctly synchronized within Revit and the coordination between plug-ins. However, once established, the link allowed for what was in Rhino to show in Revit and change as the Grasshopper script was further developed. This workflow would be very useful in professional practice for many building systems looking to bridge conceptual modeling and technical documentation in an iterative loop.