

Gregory Withers | Summer 2022

PORTFOLIO



Contents

Introduction **3**

Influence **4**

Process **6**

Reflection **13**

References **15**

Introduction

I am a project manager inspired by architecture. Building off previous study at the British Columbia Institute of Technology I am working towards a bachelor's degree in Interactive Art and Technology specializing in design at Simon Fraser University.

I believe the resonance of simple forms create **circulation** patterns that promote **functionality** and the **aesthetic** beauty of a space. Project planning and communication are essential to this creation process.

As a project manager, I use Adobe Suite, Office Suite, Figma, OnShape, Rhino, and Twinmotion in a **collaborative** way to guide the form creation process (95)

Figure 1
Photograph by Gregory Withers, (2018)

Note. I am inspired by the bold rectangular form of this building. It affords **functional** interior space and **circulation** patterns that take advantage of rooftop gardens. Large recessed windows afford natural light for the interior and **aesthetic beauty** to the exterior texture.

Influence

I am influenced tremendously by the work of my father, Robert, who studied mechanical engineering at the British Columbia Institute of Technology. He worked as a sawmill draftsman, a cabinetmaker, and then as a self-employed contractor. His attention to detail and acute planning skills provided an exemplary foundation for the project management abilities I have developed throughout my own studies.

See Figure 2 for an example of Robert's project expertise, recognized by the Vancouver Sun in 2002. **Collaborating** with an interior designer, Robert altered the form of the kitchen- removing an obstructive wall that separated the seating area. This renovation increased the **functionality** of the kitchen by enabling a natural **circulation** flow between the two rooms. He built an archway overhead which enabled skylights in the seating area to also light the kitchen. The combined renovated space can now be enjoyed as a single **beautiful** area. (147)



Figure 2

Scanned Newspaper Article of Robert's completed renovation project, Glenn Baglo | The Vancouver Sun (April 5, 2002)

Note. Original image caption reads, "Back in character: Renovator Bob Withers can sit back and relax knowing that the completed project has helped integrate the kitchen/solarium with the rest of the house."

Influence

Notice the similarities between the drawings in Figures 3 and 4 – Robert's concept of a fireplace mantel, mine of a doorway. By using these drawings as communication tools, each project was planned and executed successfully. Each balancing the principals of **circulation**, **functionality**, and **aesthetics** to create a pleasing form for the client. (52)

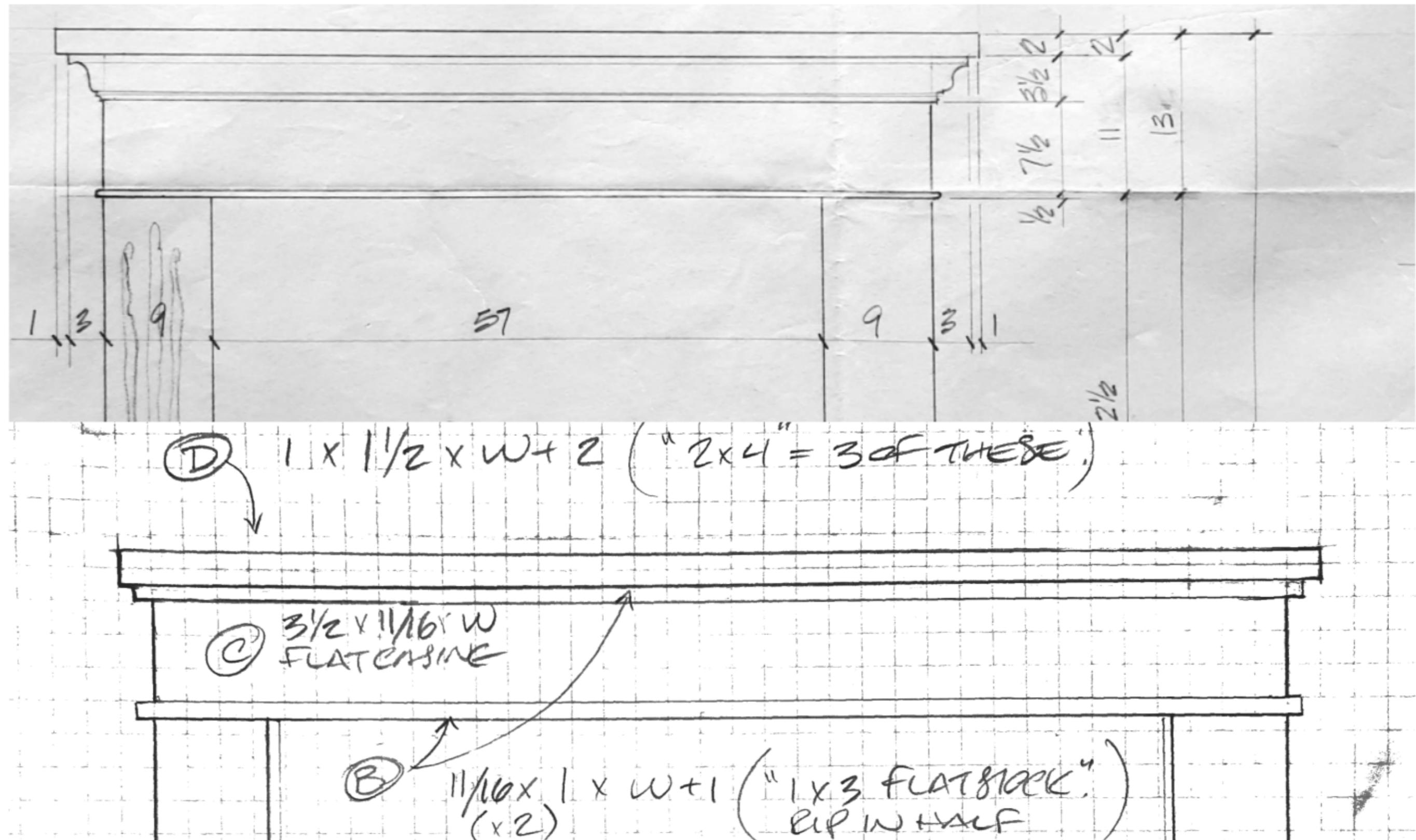


Figure 3 (upper) & Figure 4 (lower)

Scanned Drawing by Robert Withers, (unknown) and Gregory Withers (2021)

Note. The top image depicts a fireplace mantel designed by Robert. The bottom image depicts a door trim designed by Gregory. Both designers share the desire to plan in scale to better imagine how a piece may appear in life.



Process Analysis

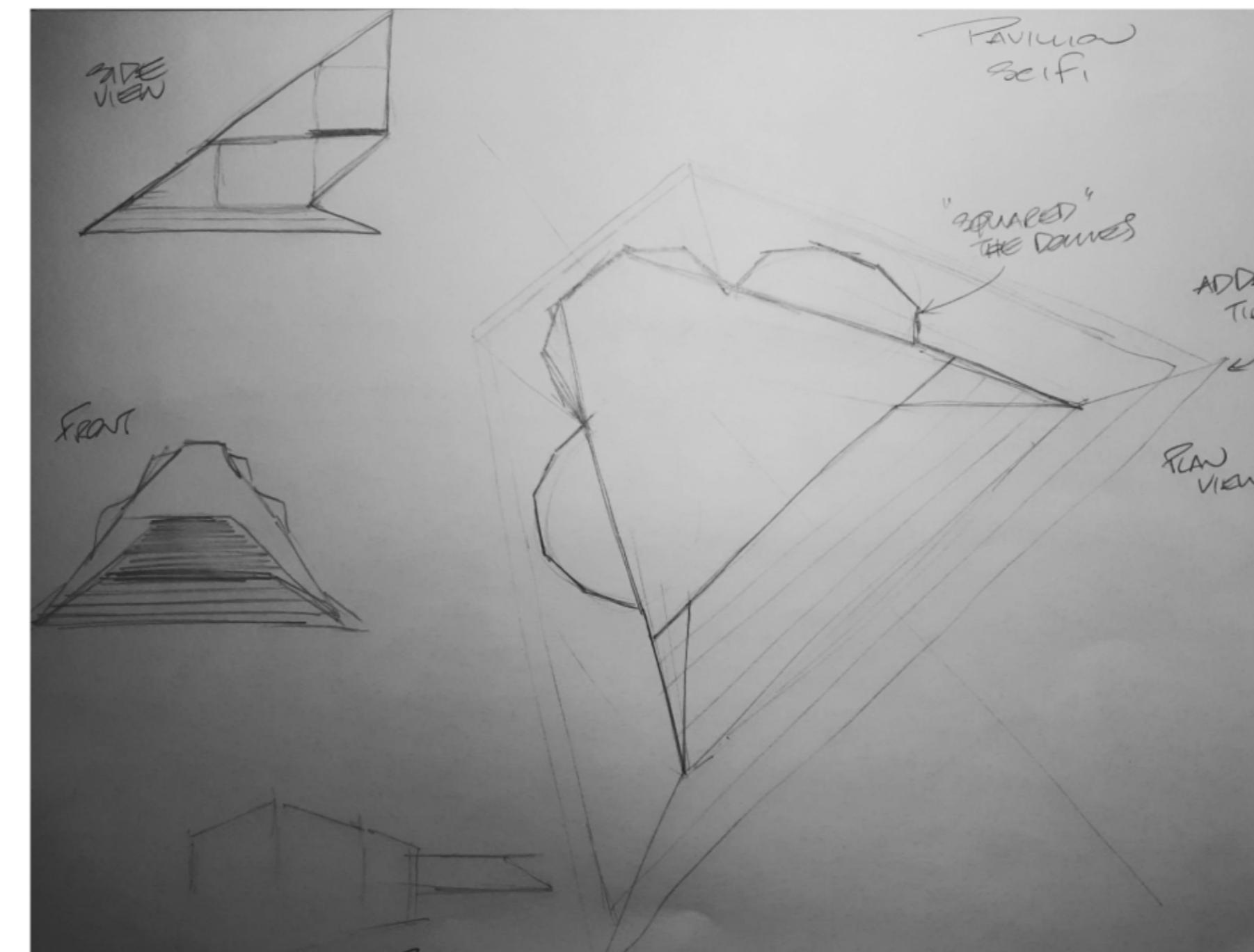
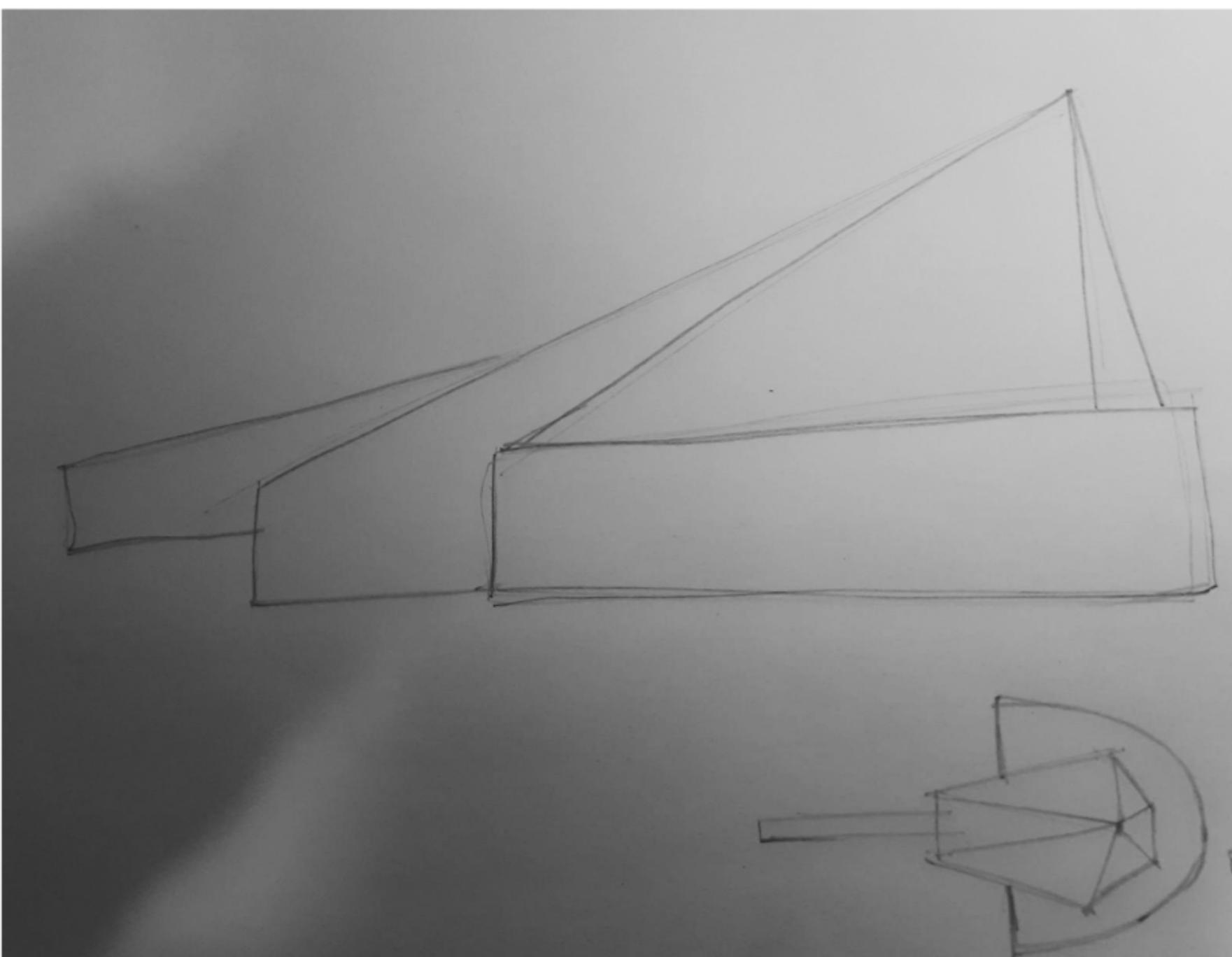
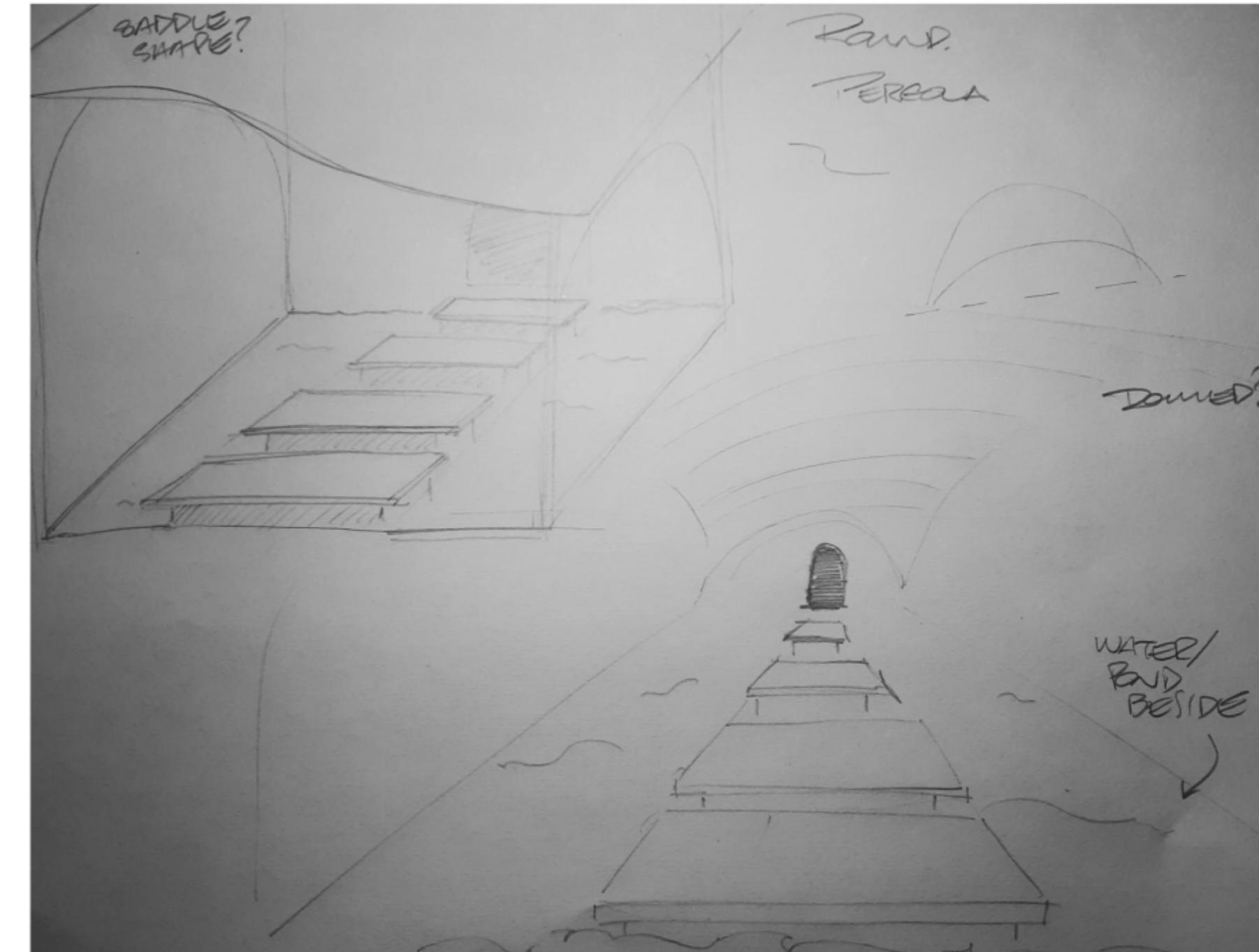
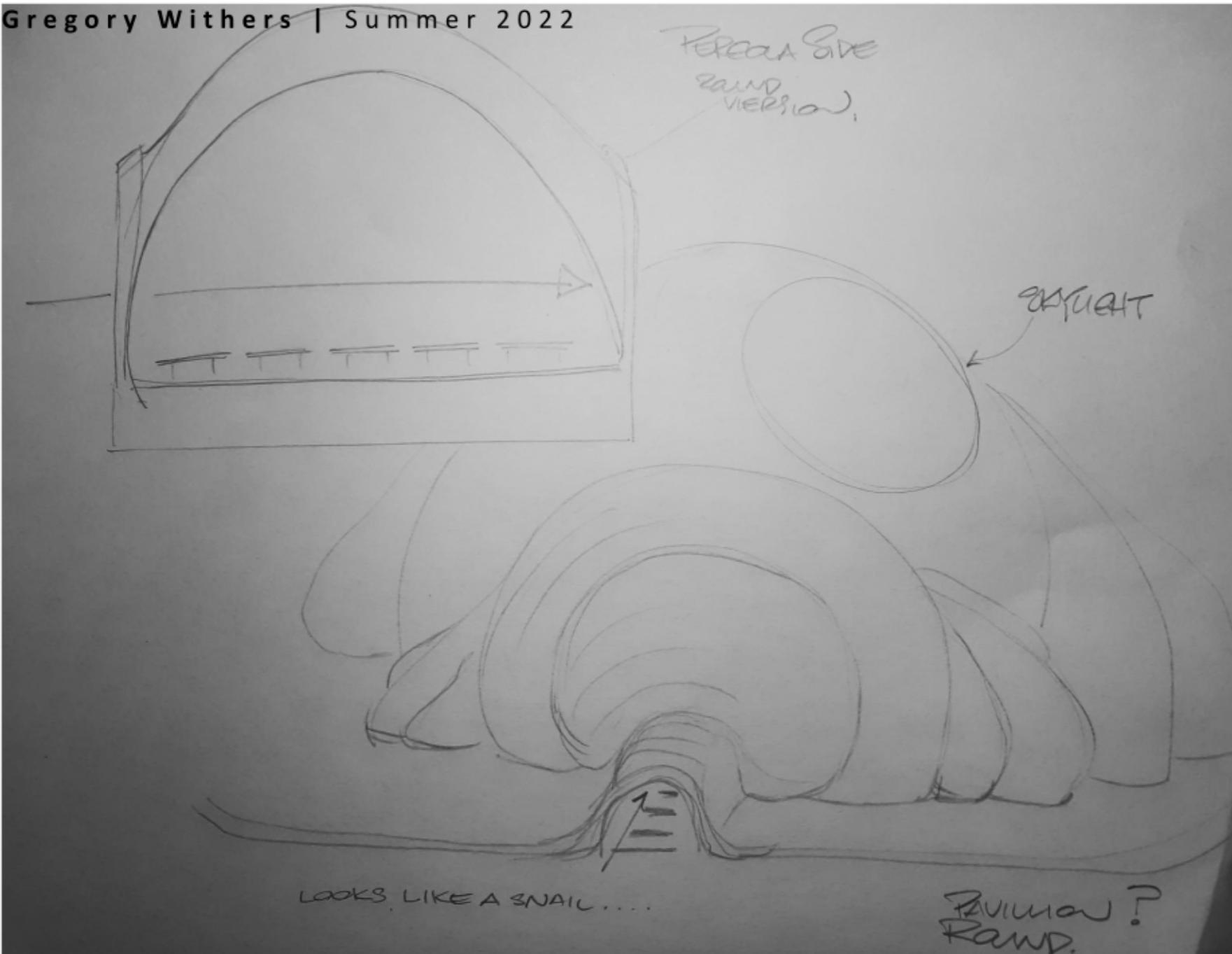
The Pavilion Project, Figure 5, was the final project for the course 233: Spatial Design, in the School of Interactive Arts and Technology at Simon Fraser University. This structure was intended to serve as a gathering site for ceremonies and/or lectures.

I worked with a team of 3 other designers. Together, we collaborated on the principles of **circulation**, **functionality**, and **aesthetics**. I was responsible for encouraging communication, producing sketches, and 3D modelling using Rhino and Twinmotion. (74)

Figure 5

Artistic Rendering by Gregory Withers, (2022)

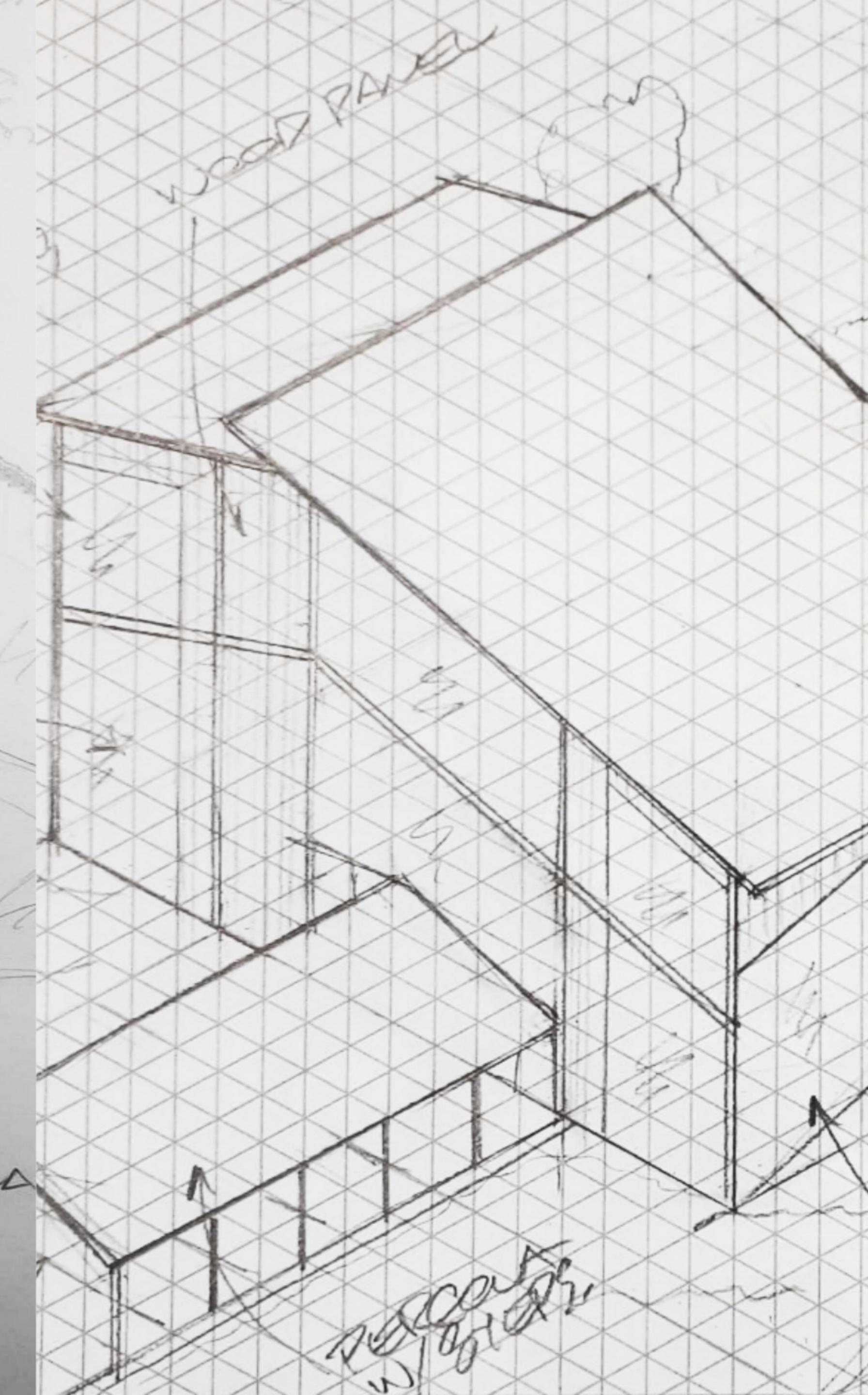
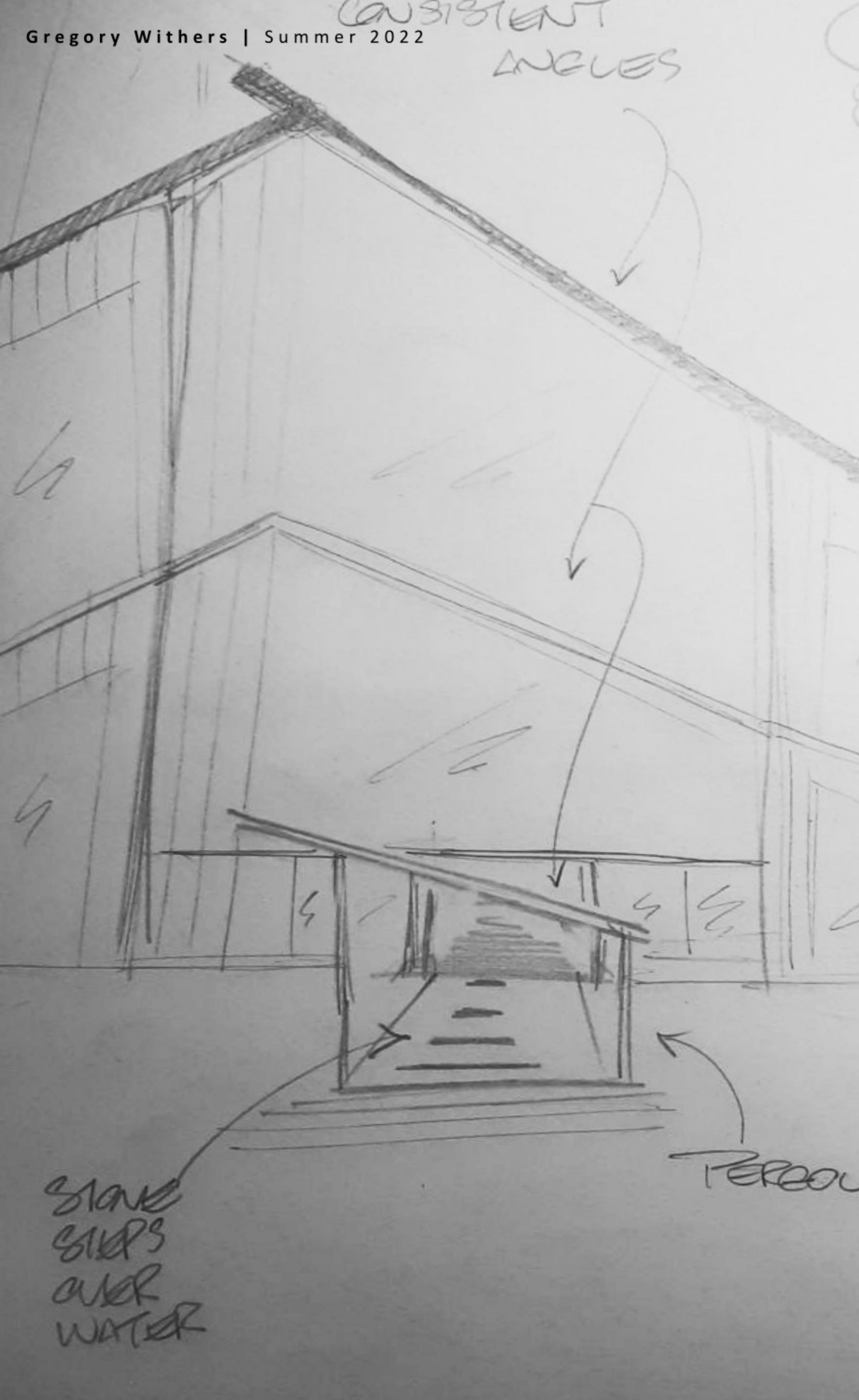
Note. Using Twinmotion, I applied a variety of surface treatments to the surrounding landscape to create a realistic, yet aesthetically pleasing scene. The reflecting pool earned praise from peers and instructors.



Process Analysis

I sketched a variety of structures to suit our purpose. Each design was inspired by **simple shapes** and the project requirements – seating for 12 people, and a raised horizontal plane for speaking or ceremonial activities. See Figures 6- 9 for some ideas. Figure 7, top-right, was selected for iteration due to its water feature and modern pillars. (58)

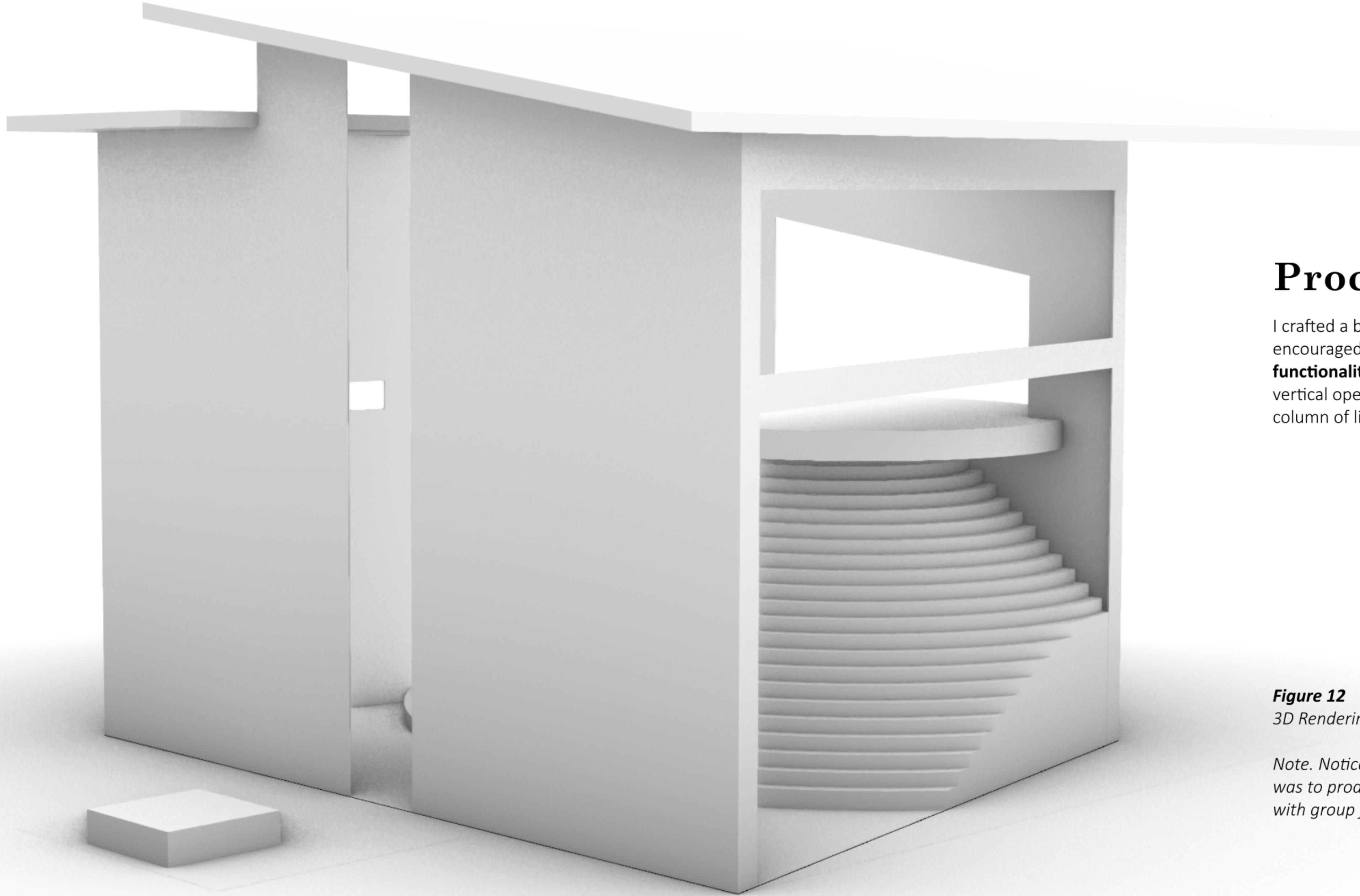
Figures 6, 7, 8, 9 (clockwise from top left)
Initial concept sketches by Gregory Withers, (2022)



Process Analysis

The pavilion took on a modern style to afford **circulation** by using an open-concept floor plan, and to afford natural light by using large windows. I drew a front face iteration, (Figure 10), then I refined the sketch using an isometric view to form the pavilion's initial plan, as seen in Figure 11. (52)

Figure 10 (left) & Figure 11 (right)
Iterative concept sketch and refined sketch by Gregory Withers, (2022)



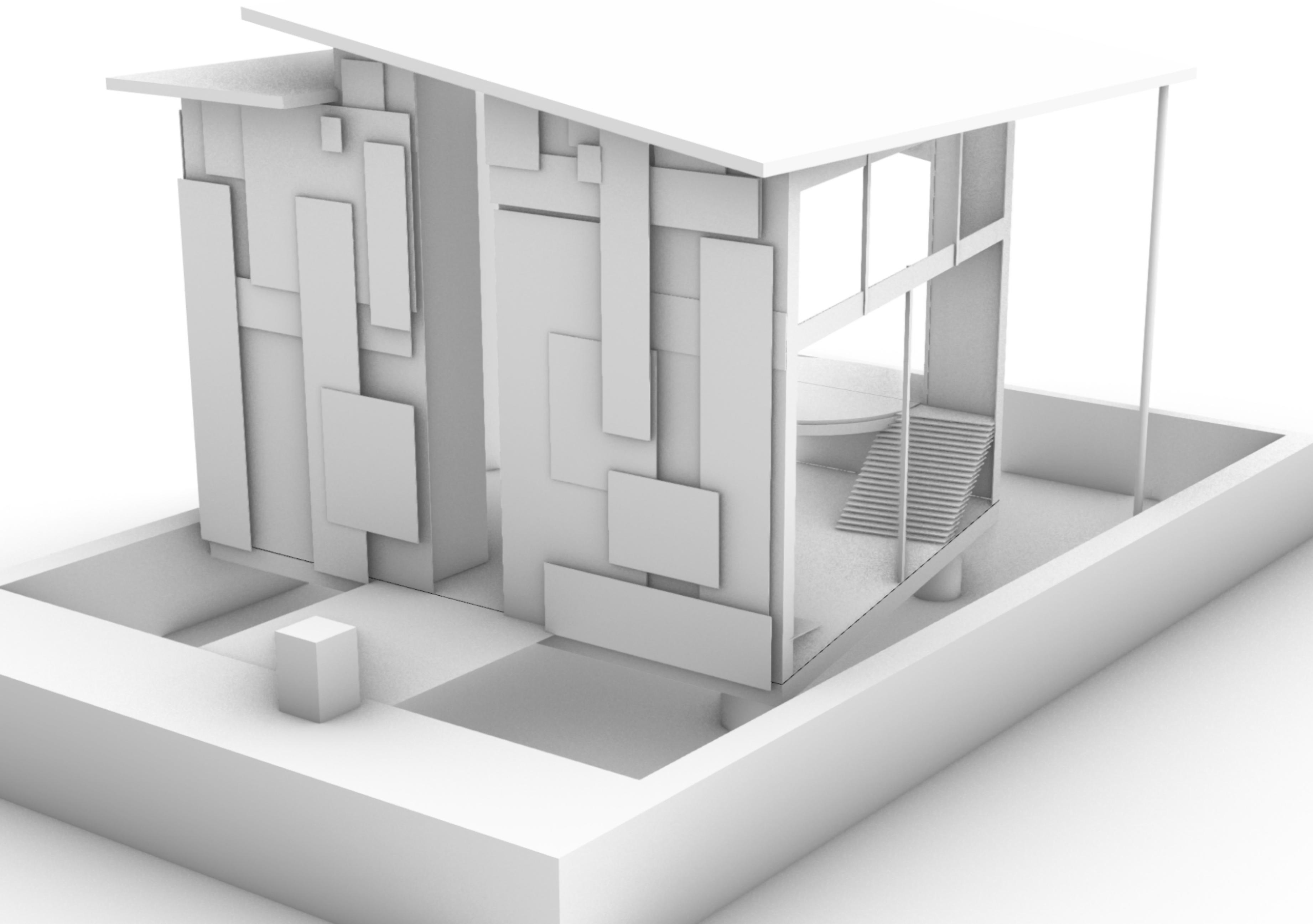
Process Analysis

I crafted a basic model using Rhino, Figure 12, and encouraged the group to critique the model to improve the **functionality** as a ceremonial structure. Notice the tall vertical opening, an iteration on the entryway, that affords a column of light to enter the front of the building. (48)

Figure 12

3D Rendering of the Pavilion by Gregory Withers, (2022)

Note. Notice the blank walls and numerous stairs. My goal was to produce a rendering akin to a sketch, then reform it with group feedback.



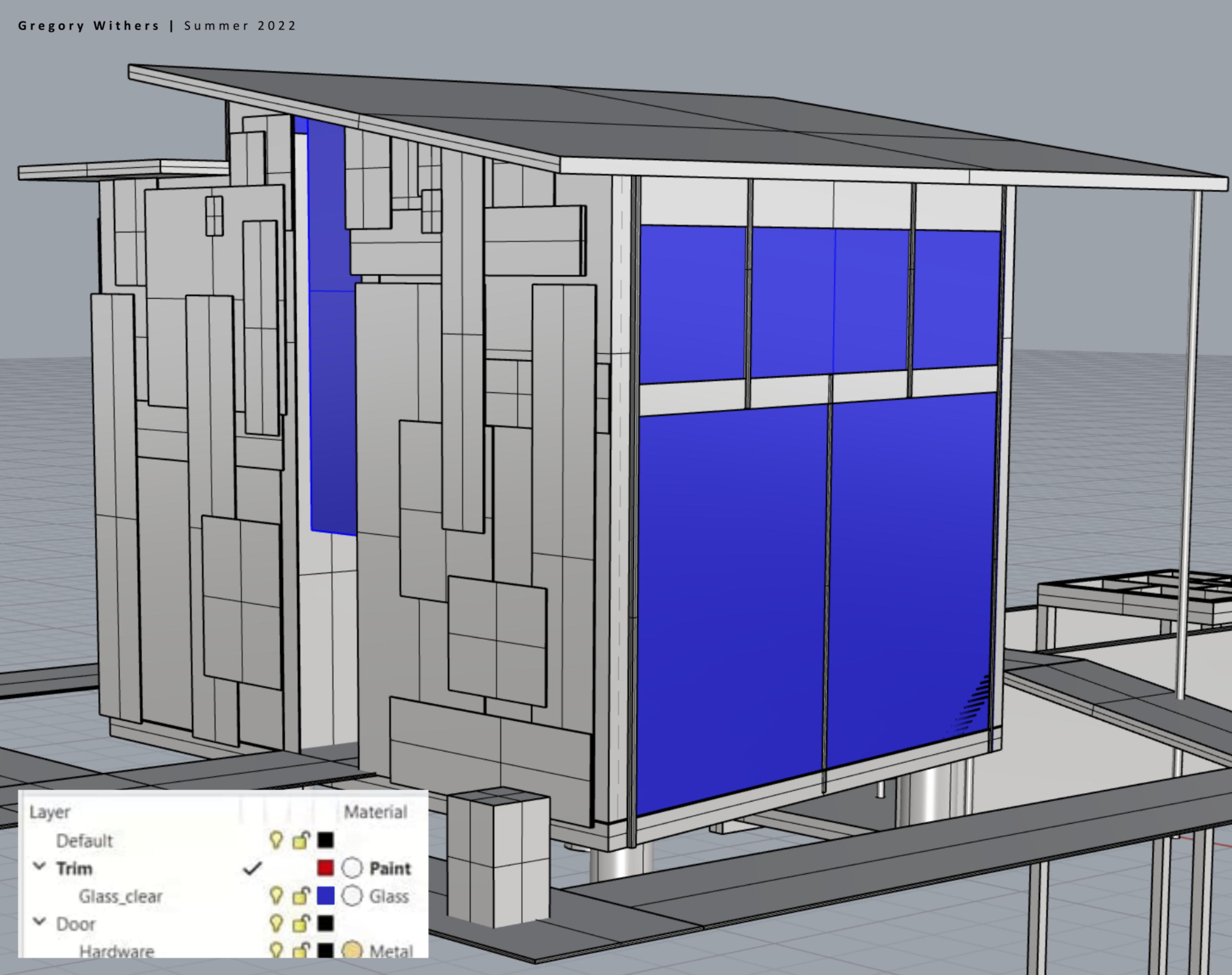
Process Analysis

I added two contrasting wall treatments to the exterior of the building: de stijl style panels on the front and left side, and infill panels on the rear and right side. See Figure 13 for an example of these treatments. (40)

Figure 13

3D Rendering of the Pavilion by Gregory Withers, (2022)

Note. Notice the wall styles starting to emerge and the foundations of a pathway surrounding the building, buliding on the need for human circulation.



Process Analysis

A **challenge** I overcame was enabling customizable textures. Initially, the model would feature a single texture on every surface. To solve this, I separated every surface onto a unique layer within Rhino. See Figure 14, where I selected every window and moved it to the same layer, coloured blue – this allowed them all to be textured as glass while retaining wood, metal, and stone textures elsewhere. (66)

Figure 14
Wireframe model by Gregory Withers, (2022)

Figure 15 (inlay)
Screenshot of Rhino layer panel by Rhino Tutorials (June 30, 2021), modified by Gregory Withers, (2022)



Process Analysis

I created the final iteration using Twinmotion to take advantage of its superior texture quality and assets, like the pedestrians in Figure 16. Each surface was textured independently using glass, wood, metal, or stone. These choices were emphasized by the dynamic lighting and rendering capabilities of Twinmotion.

I learned that 3D models are powerful communication tools and sharing ideas with them was far easier than with the initial sketches I had created. (72)

Figure 16

Artistic Rendering by Gregory Withers, (2022)

Note. Figures were placed nearby to provide a sense of scale, trees and buildings were placed in the distance to provide a sense of context to the work.

One

[do] not selectively ignore facts, but offer all the information that is relevant to an argument," (p.165).

Reflection

Professor Mike Sharples (1999) describes a series of design principles on page 165 of his book *How We Write: Writing as Creative Design*. He suggests writers use them to assist the reader's understanding of a given text. I have demonstrated two within this portfolio.

I have described the role of my father, Robert, as a seminal influence on my design career. While the entire scope of his project could not be described in these pages, my aim was to prove how he utilized collaboration and planning to enable the principles of **circulation, functionality, and aesthetic beauty** in his successful renovation. Then, to document how these principles were passed down through a concrete example, comparing Figure 3 and 4 – our similar drawing and planning styles. By focusing on the drawings as communication tools that enabled successful projects, I have attempted to supply the reader with all the information necessary to my argument: communication and planning enable the principles of architecture which produce a successful project. (182)

Reflection

Two

“present the text in a form that is designed to assist, not mislead, the reader,” (p.165).

I have presented the process analysis in a logical flow from beginning to end so the reader understands the iterative steps involved with the final rendering of the pavilion project. Each step was supplemented with a large image to provide evidence of the action I had taken. For example, adding the contrasting panel styles in Figure 13. Additionally, each text block is small and succinct, helping to reduce reader resistance. I provide the necessary context – a group project, within a school setting, where I primarily focused on drawing, modelling, and rendering duties – to ensure that my skills are highlighted but not misrepresented. (119)

References

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