Designing with Patterns and Objects: A Methodology for Elevating Client Collaboration in the Design Process for Small and Medium Sized Projects

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Abstract

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Architectural practice emerges through complex interactions among interested parties that can last the course of months or even years. These interactions can sometimes be overwhelming for clients of small & medium sized architecture. Through descriptive analysis of precedents, interviews with practitioners, and an empirical exploration of a design method this thesis seeks solutions in distilling down these complex interactions. This thesis explores the integration of a common, pattern language with experiential, full scale built objects into a methodology that enhances client engagement. It posits that establishing an easily understood language early, using patterns that are commonly found in our world and physically experienced, allows the client to understand their project in a deeper, sensory driven way that is limited with traditional drawings, digital models, or renders. This experience leads to a stronger relationship between client and designer and ultimately a stronger design.

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I would like to thank professor Griggs for inspiring me to strive for a little better each step of the way and having an open mind to my learning process. A process that loves following tangents and seemingly unlinked subjects. Without his ability to distill the complexities of this thesis I would not have completed it.

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Introduction

The architectural design process can be considered an exercise in exploring the relationships between objects, context, forces, and the senses. It can also be an exploration in the relationships between designer, client, and all other stakeholders. Architectural practice emerges through complex interactions among interested parties that can last the course of months or even years. These interactions can sometimes be overwhelming for clients that have no prior experience. For designers that work with these clients, establishing a common language to help guide them through the design process can be a challenge within itself.

Full scale physical objects and a pattern language are two design and communication tools that have the potential to create a shared design language between designer and client. Full scale physical objects offer both designers and clients the capability to interact with design elements in a sensory, experiential way. A Pattern Language, proposed by Christopher Alexander, is a practical design framework that identifies common design elements which occur over and over again in our environments. It identifies the potential relationships between these elements, and proposes a design solution to those elements and overall context. This thesis looks to explore the integration of these two tools into a methodology that enhances client engagement during the design process of small to medium scale architecture. It posits that establishing a common language early, in a way that is physically experienced and understood, allows the client to understand their project in a sensory way that is limited with traditional drawings, models, or renders. This experience leads to a stronger relationship between client and designer and ultimately a stronger design.

Before exploring the design methodology that applies these two tools an attempt will be made to establish how current design practitioners communicate ideas through an exploration and analysis of precedents and interviews. Once precedent communication techniques have been established, the role of physical objects at scale within a design context will be explored. Following that, an in depth analysis of A Pattern Language will occur and how it can be applied within a specific, local context of small to medium scaled architecture. Finally, the proposed design methodology will be defined, implemented and its impacts analyzed during its use on three theoretical projects that are in the early stages of conceptual design.

Chapter 2 ~ The Impacts of Collaboration

Excellence of Collaboration in Practice

The idea that collaboration plays a pivotal role in the creation of excellent design is backed by previous research done by Dana Cuff in her book Architecture: The Story of Practice. In an attempt to define what qualities of architectural practice produce excellent architecture, she argues that design is making sense of a situation in an inherently social way through a collective action. This definition contrasts the idea that excellent design is only done through an individual that works through a process of making decisions. "The notion of sense making implies a collective context in which we must make sense of a situation, inherently social, interpret it, and make sense with others through conversation and action in order to reach agreements" (Cuff 1996). This sense making can include designers, clients, developers, engineers, builders, and other respective stakeholders of a project and relies on language that can be interpreted by all parties. The formation of a common language. In theory, this definition seems feasible, but what does this social process look like in practice when designing small and medium scale projects?

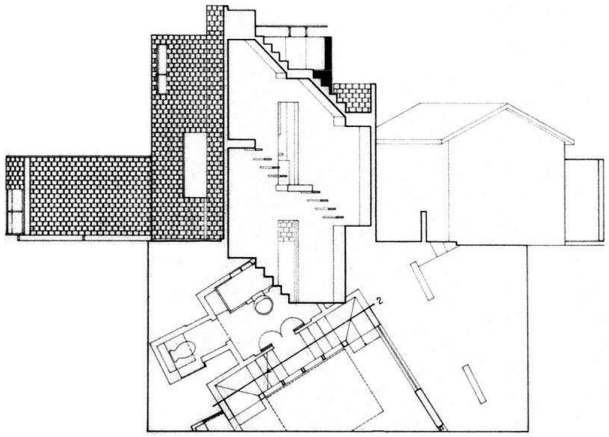

Fig. 1 Bergren House/Venice III; Section & plan, Morphosis

A case study that illustrates a project that employed a strong collaborative spirit between designer and client is the Bergren House/Venice III in Venice, California. This small residential addition was designed by the architectural firm Morphosis in 1986 for a professor at UCLA with a modest budget. Interestingly, the design work of the home was purportedly shared by both principals of the practice, Michael Rotondi and Thom Mayne, instead of having a lead designer. The interactions between client and designers are also of note. While the client states that, “I have the feeling that I did nothing, that I had nothing to do with the design of it at all…” the architects saw her as an active and valuable contributor (Cuff 1996). This sentiment is supported by the fact that both parties met frequently over the course of the two year project to discuss the design as it developed.

This intimate, frequent participation process between architects and the client was conducted through drawings and study models. These representations would focus initially on the functionality of the project and, once enough trust was established and the client felt these needs were met, evolved into deeper conceptual development. This close collaboration between the architects and client netted a building that both parties felt emotionally connected to and had a feeling of ownership.

Because of this connection, there is evidence to suggest that the building will not only be intimately cared for but has the potential to increase the building's longevity.

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Types of Communication

Intimate and frequent participation proves beneficial in creating excellent architectural design. But what forms of communication are performed during these collaboration sessions? While this thesis is focused on the exploration of creating and testing a design methodology it is deeply rooted in the understanding of communication techniques

Fig. 2 Exterior 1 ~ Bergren House/Venice III, Morphosis

Fig. 3 Exterior 2 ~ Bergren House/Venice III, Morphosis

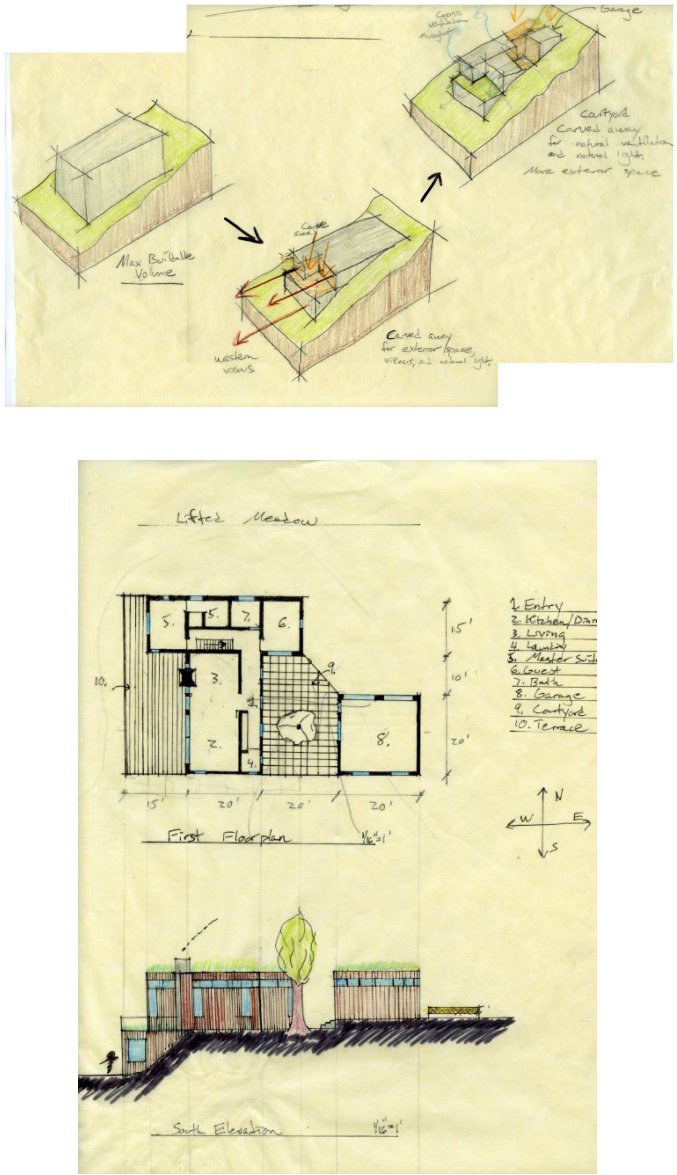

Fig. 4 Examples of early concept diagrams (top) & sketches (bottom)

utilized by designers. To do so, research was done into contemporary design practices' communication methods, with emphasis on client interactions. Interviews were conducted to enhance the quality of this research. These interviews will be expanded upon in the next section, but their common communication methods will be discussed here.

In practice, some tools have both design and communication functions. Designers rely heavily on sketches and drawings at different levels of a project's development. These sketches will eventually evolve into technical, accurate drawings used for permitting, engineering, and construction communications for a project. Generating these refined drawing sets is an important service that architectural practice offers, but is outside of the scope of this thesis which focuses on early design phases. In these early design phases designers graphically convey ideas through concept sketches and diagrams. These tools are quick and effective ways for designers to translate complex ideas to clients. However, scale and feel of a space can be challenging for some to comprehend through a two dimensional representation.

On the other side of the spectrum are full scale mock ups which are great for testing new details at

scale. They allow you to use your full body, all of your senses, to understand an idea. However, they can be time consuming and costly to make and are still experienced in a workshop removed from the actual project site. Scale models are also utilized as presentation tools. Quicker and cheaper to produce than full scale mock ups, scale models provide another approach to communicating ideas in three dimensional forms. They allow designers the ability to study proportions, scales, and materials in relatively effective manners. However, they are still time consuming and static, meaning they are difficult to make changes to.

Because of their time consuming nature the utilization of scale models has been declining in the modern architecture practice. Their usage is also waning due to the emergence of digital modeling software, high fidelity digital renders, and virtual reality walkthroughs which allow for highly efficient workflows that other methods, such as scale models, are unable to match. They do a reasonably good job of conveying scale, materiality, the look of the space, and are efficient to produce, communicate and update. Coupled with cloud-based collaboration software, such as Miro and Smartsheet, some practices have even elected to work predominantly digitally for both their design and communication capabilities.

Fig. 5 Full-scale mock ups of a built detail (left) and reconstructed detail (right), KieranTimberlake

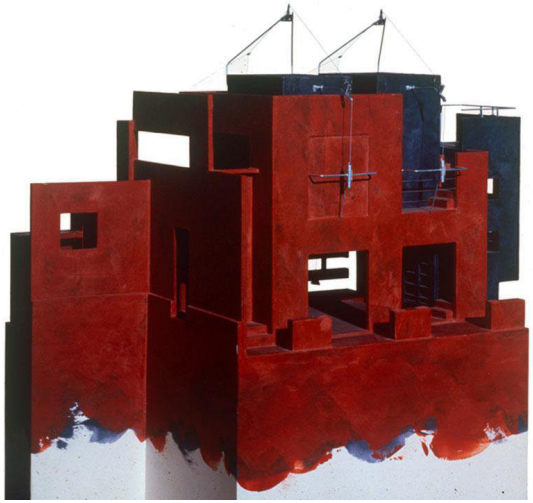

Fig. 6 Scale Model; Bergren House/Venice III, Morphosis

Fig. 7 Digital Render; Baumgardner Redux, SHED

While there is a perceived migration of firms towards more digital design methods there seems to be a level of dismay attached to this transition. Some practitioners have voiced their dismay of the profession moving further away from analogue communication & design methods, but have resigned themselves to the benefits of digital design. One of the architect's interviewed eloquently expressed this sentiment:

"I miss the actual models but the digital modeling is so efficient and better for communication because you can pass it along, and it's easy to edit. It has flexibility and a resource that can accommodate change far more than a physical model can be."

-Eric Cobb, Architect

They recognize the efficiencies gained through digital communication tools, but lament the loss of physicality of the scale models. The method this thesis proposes looks to employ the efficiencies of digital workflows and sketches but with the added physicality of mock ups and models layer back into the design process.

Collaboration in Contemporary Practices

"Trust is important to be able to have that open dialogue with your clients."

-Eric Cobb, Architect

To further enhance the understanding of how practitioners communicate with clients, multiple interviews were conducted with architects, designers, educators, and engineers. These interviews were specifically interested in how each practice engaged and communicated with their clients. A full list of practitioners that were interviewed can be found in Appendix A and the interviews can be found in Appendix B. The selection criteria for these interviews included a focus on designers in the Pacific Northwest and a focus on practices that specialize in small to medium scaled typologies. This typically included residential projects with varying scales. The below is a small, but varying selection of collaboration methods used by these practitioners.

As expressed in the previous section some practices have decided to implement fully digital design and communication methods. One of the firms interviewed describes their fully digital communication process with the client:

"Miro is a controlled, curated place to move the project forward. Drawings, renders, precedent studies. This is our primary communication tool for decision making with the client. That said, we use other methods of communication outside of Miro. For example, We even use VR headset for virtual walkthroughs on some projects. Most of our clients already have these headsets so it's an easy service for us to provide. We are always looking for the most efficient way to do things. We've also adopted smartsheet and G-suite as collaborative tools. We give clients access to these tools so we can share [with them]."

-Prentis Hale, SHED

This practice places a high value on collaboration with their clients and wanted to create a process that allowed them to take advantage of these efficient, direct to client tools. Some of which the client already has access to such as the emergence of VR headsets. With tools such as Miro, the turnaround time for decision making is greatly reduced because the client is able to see concepts and iterations almost instantly and are able to interact with them directly in the tool to provide feedback to the designer. All in one place and from the comfort of their home.

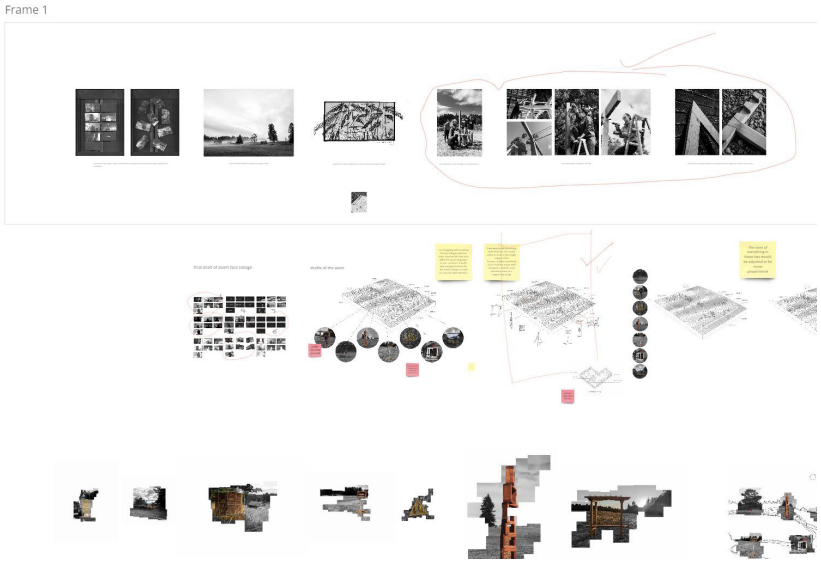

Fig. 8 Example of Miro collaboration board

While this method is collaborative forward and engaging for the client, the practice that employs it de-emphasized the value of in-person meetings. For others, in-person connections are pivotal to their design process:

"Personal contact has been an important part. Being able to sit down with them and talk through options and opportunities. We would never put an architect's ego on the table. It's the client's project and our role is to guide and provide recommendations. You have to be a listener. They will see you as an ally, an interpreter, a collaborator. Getting your client to that position is very important and trust is incredibly important. We'll have fantastic ideas and terrible ideas and you need to tell me. And that goes for the client as well."

-Eric Cobb, E.Cobb Architects

Getting to know clients on an intimate level is also important. For one practitioner, their design process prioritizes the building of strong relationships and trust:

"We ask questions that can be considered touchy. Intimate. These questions tell you as a designer how they will experience the space. How they live. We are as much an educator as a server for our clients. I start the project with the ideas, then project architects take over, and

then our builders finish the job. [...] You can't do it without listening to them or building deep relationships with your clients. Accepting them and that they have things that matter to them."

-Kim Clements, JAS

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Summary

Based on the interviews and precedents there are multiple forms of communication and design techniques that can be employed early in the process. Digital methods are increasingly more efficient than analogue varieties, however they come at the cost of effectively representing the physicality of a design for some clients. Still, designers are migrating towards these digital methods mostly due to costs. Regardless of the implemented communication techniques a common theme amongst most practitioners interviewed is that they emphasize the importance of collaboration during all phases of a project. An open channel of communication is paramount to building trust with the client. Backed by Cuff's work, this sentiment lays the foundation for design excellence.

Chapter 3 ~ Sensory Experiences in Design

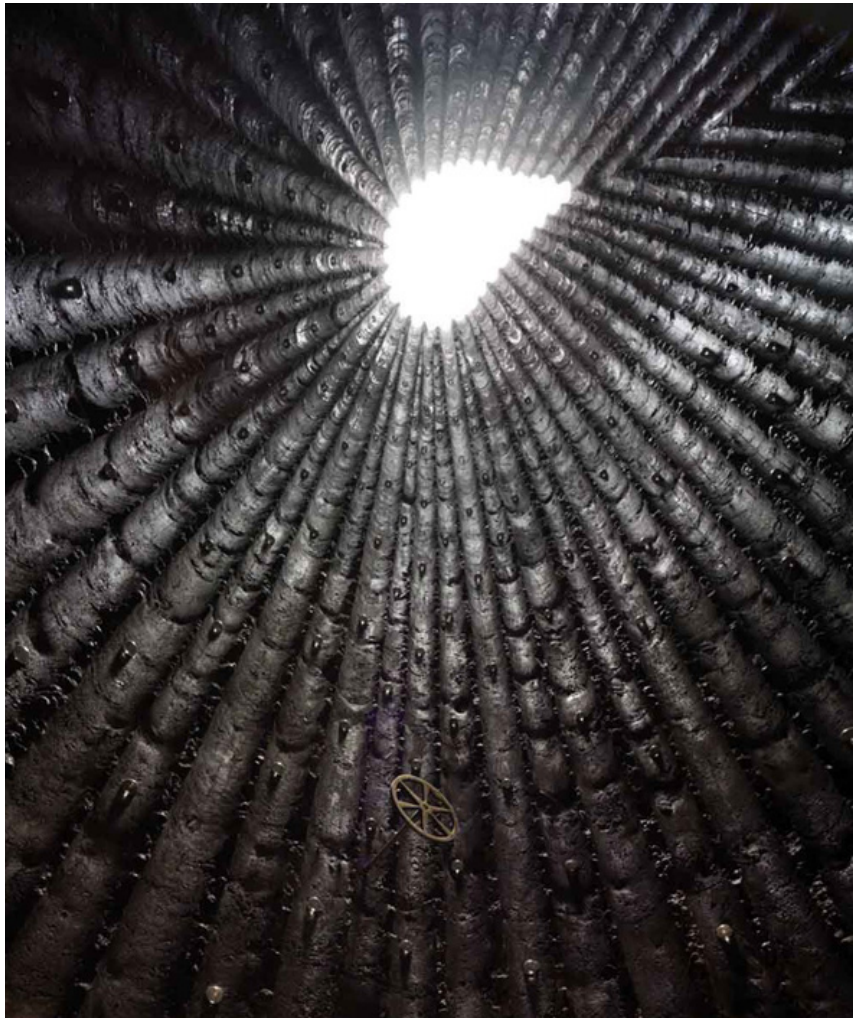


Fig. 9 Bruder Klaus Chapel, opening to the sky, Zumthor, 2007

"An attention to exposing the process of making has consistently animated our work."

-Morphosis

Digital Design Methods

Digital design tools and software have increasingly become viable options for architects and designers to implement into their design process. Computer aided design (CAD) software has increased efficiency for technical drawings, 3D modeling software allows designers the ability to quickly test design ideas and communicate them without the need to build physical scale models. This saves considerable time. Digital models are also easily shareable to a client and changes can be made in an iterative way which can further speed up the design process. Digital rendering software has also come a long way and provides architects with additional capabilities such as generating photorealistic renders, real-time walkthroughs, and even virtual reality environments for tech savvy clients.

The evidence of these qualities of digital design tools was supported by practicing designers and architects who were interviewed for this thesis. The quotes below are responses of two designers to being asked about their design and communication processes:

"We work almost always in the digital space. We've found that 3D digital models provide real power to the client to make good decisions [...] are easy to share with clients, and incredibly efficient to make changes to. This keeps the design moving in the right direction in a timely manner."

-Prentis Hale, Principal, SHED

"Yes, people always like to hold an artifact in their hands, [but] in most cases we don't produce mock ups along the way. Typically drawings and digital solid models."

-Tim Eliassen, Founder, TriPyramid

With the emergence of artificial intelligence software, there are opportunities for these efficiencies to further improve. For example, the following concept renders were created within a matter of seconds by prompting an AI software that generates images from inputting natural language (conversational) text, named Dall*E 2, with the following description: **A 3D render of an A frame home on a lake.**

Fig. 10 Examples of photoreal digital renders, courtesy of Bobby-parker.com

Fig. 11 Example of photoreal digital renders: courtesy of Twinmotion.com

Fig. 12 Examples of AI generated 3D render concepts. Created with Dall*E 2

The efficiency benefits of a digital design and communication workflow are apparent. They cut labor costs and provide interactive, collaborative ways for clients to engage with the design process of their projects throughout its entirety. Some in real time. However, these efficiencies come at a cost. Designing and communicating through digital methods only engages the eyes when trying to make sense of a project. While digital methods emphasize visually stimulating experiences and environments, they do so without the other senses of our bodies.

Tangibility and Sensory Experience

Tangible (adj): Capable of being perceived especially by the sense of touch. Substantially real. Tactile.
-Merriam Webster Dictionary

There's a noticeable difference to physically experiencing architecture and design when compared to experiencing it through a book, computer, or a drawing on a piece of paper. Physically experiencing something provides it a sense of scale and a sense of spatial understanding that isn't possible when experiencing it through a screen. We experience physical spaces with the entirety of our bodies while we experience two dimensional representations, or three dimensional simulations, of

spaces predominately with our eyes. Our sense of hearing is engaged by the sounds of footsteps on the stone floor reverberating around the cathedral ceiling of a train station's grand hall. We feel the vibrations of our footsteps pulsing through our legs. Our sense of smell is awakened by the aroma of the coffee stand next to the train platform. And our skin feels the warmth of the sun rays beaming through the clerestory windows high above the comings and goings of daily passengers.

Sense (n): a faculty by which the body perceives an external stimulus; one of the faculties of sight, smell, hearing, taste, and touch.

"The word sense is derived from the Latin word, sensus, which means 'faculty of feeling, thought, meaning, perception. Any of the manners by which living beings perceive the physical world."

-Oxford Dictionary

Each sense has its own specific receptors and neural pathways that transmit information to the brain to be processed and interpreted. The more senses are engaged, the more robust and complex the experience. Much like Christopher Alexander posits that overlapping additional patterns onto a space enhances the depth of the design,

Fig. 13 Clerestory Light in Grand Central Station, NY

Fig. 14 Photo of Sunset in Ocean City, NJ. Visually stimulating, but other senses aren't engaged

so does overlapping our senses when making sense of a space or of a thing. For example the anthropologist, Ashley Montagu, theorized that,

"The skin is the oldest and the most sensitive of our organs, our first medium of communication, and our most efficient protector[...] even the transparent cornea of the eye is overlain by a layer of modified skin [...] Touch is the parent of our eyes, ears, nose, and mouth. It is the sense which became differentiated into the others, a fact that seems to be recognized in the age-old evaluation of touch as "the mother of the senses." (Montagu 1986).

A major tradeoff of a world increasingly molded by technological advancement is the neglection of the senses that aren't visual or auditory. Mainly, the sense of touch is removed from our experiences surrounding architecture and design. In terms of communicating in a common language, this imbalance of the senses may create an incomplete understanding for new clients when attempting to make sense of a digital representation of their designs. Their body as a ruler has been removed, skewing their sense of scale. Their skin is unable to feel the temperature and texture differences of proposed materials, hindering their potential to make an informed decision. Expanding on the idea of the body as a ruler, one of the architects

interviewed lamented the fact that he did not engage his clients more with physical design items. When asked about if they use full scale, built objects to communicate design ideas with a client they responded:

"Not as much as I should have used them. I've always been lazy in making [physical] models. But for the client they respond favorably to 3D items and most clients have zero 3D capability when looking at a drawing. To show someone the thing you designed for them in 3D they get on the edge of their seat. It's a huge help and a great sales tool."

-Louis Mackall, Architect

Certain architects place a heightened emphasis on sensory led, phenomenological design. For example, Peter Zumthor approaches architecture through careful consideration of light, materials, and space to instill a certain feeling in those inhabiting his projects. He expresses this approach as "making atmospheres" and defines it as, "A thing that has a beautiful, natural presence; things that move me....We perceive atmosphere through our emotional sensibility - a form of perception that works incredibly quickly..." (Zumthor 2006).

Zumthor expands on how he approaches creating

Fig. 15 Entry; Bruder Klaus Chapel, Zumthor, 2007

Fig. 16 Grundtvigs Church, Copenhagen, Denmark, 1926

atmospheres by laying out nine elements, all of which attempt to balance the senses. A few examples are: feeling the presence of the building and its weight, material compatibility, the sounds of interior spaces, temperatures of spaces, the lighting qualities on objects, and the relationship between the building and its surroundings. All of these elements combine to create a full body experience. They allow us to make 'sense' of a space by interweaving all of our faculties.

Juhani Pallasmaa speaks of the multisensory experiences of architecture, "Every touching experience of architecture is multi-sensory; qualities of space, matter and scale are measured equally by the eye, ear, nose, skin, tongue, skeleton and muscle...Instead of mere vision, or the five classical senses, architecture involves several realms of sensory experience which interact and fuse into each other...The eyes want to collaborate with the other senses." (Pallasmaa 2012). It is fitting that the senses invariably want to collaborate in a design process that is searching for elevating interhuman connection.

The Value of Physical Experiences

"There's nothing that beats walking around in [a] space to understand the architecture, though we try to imitate it as best we can before we're in [the] space."

-Suzanne Zahr, Architect

A Place of My Own

In his book, A Place of My Own, the writer Michael Pollan writes about his desire to not only have a writing cabin, but also to build it himself. Prior to this project, Pollan states he had no experience in architecture or building. He credits this desire to build something partially to wanting "an antidote to the increasingly abstract and abstracted nature of my altogether typical working life, most of which was conducted in front of screens at an ever-greater remove from the natural world." An abstraction that many people, not just writers, are experiencing today.

Pollan's story recounts his experience of building his 'writer's hut', beginning with his process of selecting the site for the little structure. Pollan takes multiple approaches to solving the site problem. He takes the advice of his architect, Charlie Myer, which was, "You've

Fig. 17 Michael Pollan's writer's hut, exterior, Connecticut, 1900s

Fig. 18 Michael Pollan's writer's hut, interior, Connecticut, 1900s

been hiking all day, it's getting late, and you're looking for a good campsite–just a comfortable, safe-feeling place to spend the night. That's your site." He also applies a Feng-shui method of 'finding the flow of Chi' by running down his property's hill and allowing gravity, and other forces such as the forest and a large boulder, to direct his body towards where the site should be. Both of these methods of site selection employed a multi-sensory approach.

Once the site has been established Pollan then divulges the process of design, construction and all the problems along the way. From figuring out how to connect the building to the ground, joining the rafters to the timber frame, shingling the roof, and finishing the interior. All with the help of his hired weekend builder, Joe, and a continual stream of drawings from the architect. Throughout his experience of building this 'primitive hut', Pollan expresses his mostly theoretical understanding of architecture until he stands in his building for the first time. Pollan states this shift as:

"[...]The experience of coming into my building for the first time was not foremost a literary or semiological experience, a matter of communication. This is not to say that the experience wasn't rich with meanings and layered with symbols; it was, but the meanings and symbols were

of a different order than the ones architectural theorists talk about: no key was required to unlock their meaning. Well, actually there is one key [...] I mean, of course, the human body, without which the experience of the room as I have described it would be meaningless." (Pollan 1997)

He uses the concept of prospect and refuge and his ability to sense it, and be moved by it, when looking out the large window overlooking his garden and feeling the thick walls flanking him. Providing shelter and safety. Believing that spatial patterns such as prospect and refuge are understood more deeply through a physical connection with our bodies since our sense of their meaning depends only on our firsthand experience. Which everyone has and can relate to. So while language and signs, such as drawings and diagrams are means to create architecture, they leave out the physical components to experiencing architecture. That the body is capable of deeply understanding things, such as the weight of a beam or the compression and expansion of space, that language by itself lacks. This speaks to the potential value of including a physical language into design.

Through this personal endeavor to build his own building, Pollan ends with a realization of his connection to his building. "[...] the person that it hinted at was surely recognizable as me..." Not only was the experience gratifying, but that his original dream now stood in front of him as a literal fact. That this fact felt like an extension of who he is and will become. "[...] Wondering [...] about how this building I'd helped to shape might come in time to shape me, where the two of us might be headed." (Pollan 1997). Even though it was a small project it was shaped by thoughtful consideration and layered with multiple meanings from the architect, the builder, and Pollan himself. But above all, the underlying meaning that he valued the most was the personal connection.

Veneer House

The value of personal connection to a building can be seen in another project located in the town of Maeamihama, Japan. Built as a gathering space and storehouse for the town in 2013, which was severely damaged during the 2011 Great East Japan Earthquake and subsequent tsunami, it uses a construction system made predominantly of plywood (called veneer in Japan) and simple joinery techniques. The system, called Veneer House, was devised by architect Hiroto Kobayashi (and his students at Keio University) in response to the earthquake disaster. With the goal of creating a system that uses low cost materials that are readily available anywhere in the

Fig. 19 Eames “House of Cards”

Fig. 20 Veneer House System

world and can be built by anyone without experience. The system is inspired by the Eames House of Cards, where each card within the deck comes with six notches to allow for creative building. It is composed of pre-cut plywood components and requires only simple hand tools to be joined together. Construction documents are designed with diagrammatic illustrations so that they are easy for anyone to understand without the need for technical drawings.

The gathering space in Maeamihama was the second project that utilized the Veneer House system. The first, completed in the same year, was a temporary public bathing facility that was constructed by Kobayashi and his students and did not involve the local community in a meaningful way. In contrast, the construction of the Maeamihama project employed a workforce of local fishermen who volunteered their time to build the structure in the afternoons after spending their day fishing. Kobayashi observed that the local communities of each project had differing feelings about their respective facilities:

“[The] students [that built the first project] had a massive level of satisfaction after completing the project, but the community wasn’t involved. The next project we had

the opportunity to include the community. The fisherman assembled and built the project. They felt like they had ownership."

-Hiroto Kobayashi, Architect

The first project, which did not include the local community during construction, was demolished a few years later. In contrast, the second project is still serving its community and is continually modified and enhanced to better suit their needs. Kobayashi surmises that this is partially due to each respective community's engagement and ultimate sentiment towards their project. The first project was constructed in a silo and was detached from the community that would actually use it. The second engaged the community in a meaningful way and created a sense of ownership, satisfaction, and pride that was lacking in the first.

The Maeamihama gathering space is a notable example of empowering a community through using architecture that is made in a collaborative way. Kobayashi credits the success of this project to that elevated engagement: "The social aspect of building has created a sense of meaning for the community to this structure. It is part of them." Not only does the community feel pride for this specific project, but their newfound

Fig. 21 Local fisherman constructing the community center

Fig. 22 View from the finished structure; Maeamihama

Fig. 23 Completed community center, Maeamihama, Japan, 2013

knowledge of building has empowered them to want to build homes using the same system. This heightened sense of connection to these projects sheds light on the additional benefits of communal understanding and client engagement of design.

Summary

Both digital design tools and physical engagement methods exhibit benefits when implemented into a design process. Digital design methods pose immense value propositions in terms of efficiency and interactivity, but rely heavily on the visual sense of understanding a project. This unbalanced approach to the senses is not in alignment with how we ultimately experience architecture and design. Tangible, experiential approaches to design allow for all of the senses to be engaged. These approaches provide a deeper understanding on experiential qualities such as scale, materiality, and “feel” of a project. This deeper understanding was illustrated through Pollan’s direct involvement in the design and construction of his writer’s hut. This deeper understanding led to a stronger connection towards his building. This connection was again seen with the Veneer House project in rural Japan.

But this deeper understanding through physical

experience, whether it's through full scale mock ups, allowing gravity to guide one's body towards the 'best' site for a project, or directly involving a client in the construction of their home, comes at a cost. To physically engage the client in their project potentially costs more time and money when compared to a digital design process. Instead of viewing digital design and physical design methods as competing options, they may be viewed as complementary toward each other. This thesis looks to explore a method that allows for a full bodied, sensory experience to be brought forward in the design process, but without it becoming too costly and detrimentally slowing down the process.

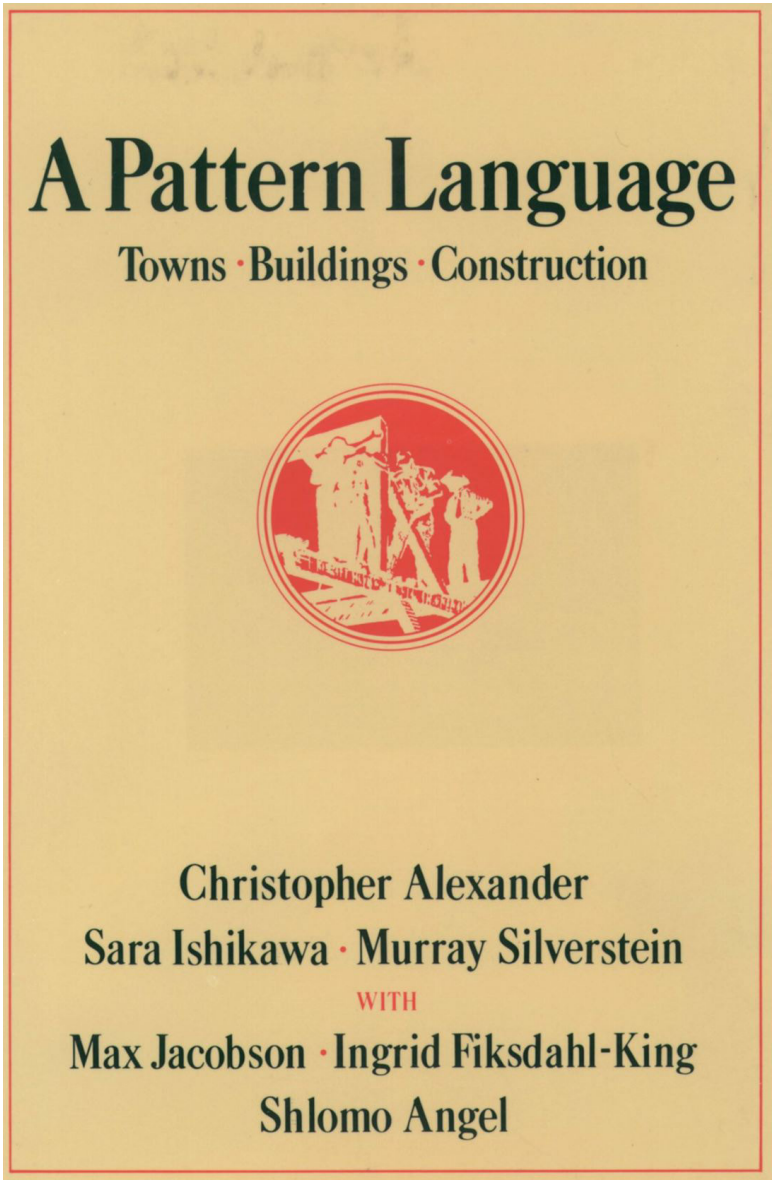


Fig. 24 A Pattern Language, cover

Chapter 4 ~ A Pattern Language, a Common Language

A Pattern Language

"...towns and buildings will not be able to become alive, unless they are made by all the people in society, and unless these people share a common pattern language, within which to make these buildings, and unless this common pattern language is alive itself."

-Christopher Alexander

In taking the learnings from the precedents previously analyzed and looking to establish a communication method that clients of small and medium scaled projects could understand, two primary factors were considered:

1. The method should be easily understood by someone who has minimal experience in design.
2. The method should provide a framework for the design process, but not be overly prescriptive.

One such method, called A Pattern Language, was devised in the late 1970s by the office of the architect, Christopher Alexander (Alexander 1977). Alexander created a design method for the built environment that identified common design elements which occur over and over again in our environment, such as a main entrance into a building or the use of courtyards, gardens, and arcades in building design. Or patterns focused on structural elements such as box columns, ground floor slabs, and perimeter walls. Even patterns that can be considered ambiguous such as “Children’s Realm”, “Teenagers Hut”, or “A Room of One’s Own” are included in his voluminous lexicon of 253 patterns. Essentially, the patterns would act as a semi-prescriptive framework for designing the built environment.

The intention of A Pattern Language was to create a practical design language, distilled from Alexander’s own building and planning efforts and experiences, that could be applied to any project regardless of typology, context, or size. While there are a total of 253 patterns in the method and most are ambiguous to typology or context, they are ranked depending on the scale and the level of detail of a project. Higher ranked patterns are macro in scale and are therefore broad strokes in their definitions while lower ranked patterns are micro in scale and highly

Fig. 25 Photo of Teenagers Hut Pattern

Fig. 26 Photo of Room of One’s Own Pattern

Fig. 27 Photo of Community of 7,000 Pattern

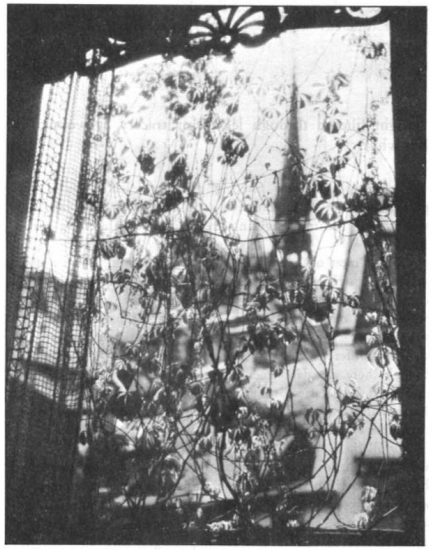


Fig. 28 Photo of Filtered Light Pattern

specific in their focus. This was done to provide an order of operations for the method to be used practically. Alexander states that the language "has the structure of a network...use it as a sequence, going through the patterns". The designer would begin with higher ranked patterns that allowed for loose, less defined design moves and would progress towards layering on the finer detail patterns such as structural elements, frame openings, and indoor details as the project developed. Putting these patterns together creates the project language.

Examples of Patterns in the Language

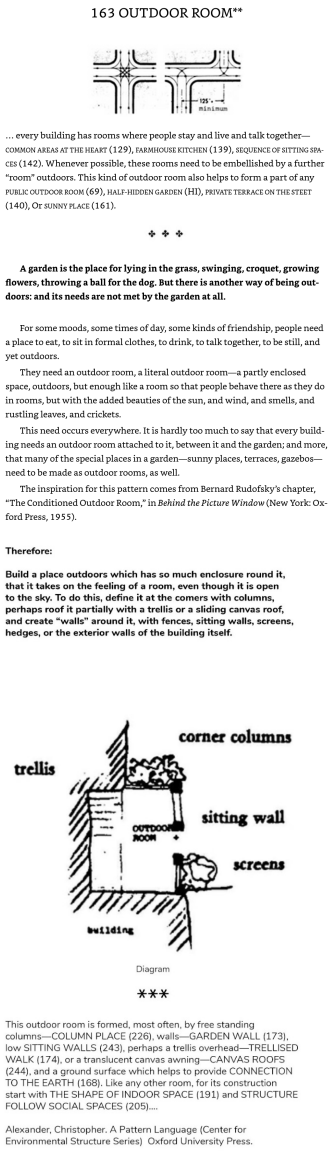
Some examples of high ranked patterns that relate to a project that is at the region, city, or community scale are "Distribution of Towns" and "Community of 7,000". Lower ranked patterns that are tailored towards detail elements of a project include "Dormer Windows", "Filtered Light", and "Floor Surface."

For clarity, each of these patterns is defined using the same template of information and uses the same seven components. These components are as follows:

1. A picture that attempts to convey a common example.
2. An introductory paragraph which adds context to the pattern.
3. Headline that gives the “essence of the problem” succinctly
4. Body of the pattern. Its empirical background, evidence for its validity, and the range of different ways the pattern can be manifested.
5. The design solution to the pattern. The heart of the pattern stated in the form of an instruction.
6. A Diagram of the pattern
7. Paragraph that ties the pattern to “smaller” patterns

When combined, these components create a format that looks like the pattern, Outdoor Room, illustrated in Figure 29.

In addition to the ranking system, each pattern is designated a confidence level by Alexander. This confidence system, located next to the pattern’s name is targeted at the pattern’s proposed solution, meaning a high confidence score would state that the proposed solution “summarizes a property common to all possible ways of solving the stated problem” (Alexander 1977). Each



163 OUTDOOR ROOM**

… every building has rooms where people stay and live and talk together—COMMON AREAS AT THE HEART (129), FARMHOUSE KITCHEN (139), SEQUENCE OF SITTING SPACES (142). Whenever possible, these rooms need to be embellished by a further “room” outdoors. This kind of outdoor room also helps to form a part of any PUBLIC OUTDOOR ROOM (69), HALF-HIDDEN GARDEN (HI), PRIVATE TERRACE ON THE STEET (140), Or SUNNY PLACE (161).

✣ ✣ ✣

A garden is the place for lying in the grass, swinging, croquet, growing flowers, throwing a ball for the dog. But there is another way of being outdoors: and its needs are not met by the garden at all.

For some moods, some times of day, some kinds of friendship, people need a place to eat, to sit in formal clothes, to drink, to talk together, to be still, and yet outdoors.

They need an outdoor room, a literal outdoor room—a partly enclosed space, outdoors, but enough like a room so that people behave there as they do in rooms, but with the added beauties of the sun, and wind, and smells, and rustling leaves, and crickets.

This need occurs everywhere. It is hardly too much to say that every building needs an outdoor room attached to it, between it and the garden; and more, that many of the special places in a garden—sunny places, terraces, gazebos—need to be made as outdoor rooms, as well.

The inspiration for this pattern comes from Bernard Rudofsky’s chapter, “The Conditioned Outdoor Room,” in *Behind the Picture Window* (New York: Oxford Press, 1955).

Therefore:

Build a place outdoors which has so much enclosure round it, that it takes on the feeling of a room, even though it is open to the sky. To do this, define it at the comers with columns, perhaps roof it partially with a trellis or a sliding canvas roof, and create “walls” around it, with fences, sitting walls, screens, hedges, or the exterior walls of the building itself.

Diagram

***

This outdoor room is formed, most often, by free standing columns—COLUMN PLACE (226), walls—GARDEN WALL (173), low SITTING WALLS (243), perhaps a trellis overhead—TRELLISED WALK (174), or a translucent canvas awning—CANVAS ROOFS (244), and a ground surface which helps to provide CONNECTION TO THE EARTH (168). Like any other room, for its construction start with THE SHAPE OF INDOOR SPACE (191) and STRUCTURE FOLLOW SOCIAL SPACES (205)….

Alexander, Christopher. A Pattern Language (Center for Environmental Structure Series) Oxford University Press.

Fig. 29 Excerpt from Pattern Language of “Outdoor Room”

pattern is scored with two asterisks (see Fig. 29) which states a high confidence, one asterisk states somewhat confident, and those patterns that show no asterisk are deemed to have no confidence that the proposed solution is applicable to “all possible ways of solving the stated problem”.

As an example, the pattern “Distribution of Towns” has no asterisk, meaning Alexander isn’t confident that his solution applies to all situations. So consider it only a low confidence recommendation. For illustrative purposes Alexander’s proposed solution is below:

“Encourage a birth and death process for towns within the region, which gradually has these effects: 1. The population is evenly distributed in terms of different sizes- for example. one town with l,000,000 people, 10 towns with 100,000 people each, 100 towns with 10,000 people each, and 1000 towns with 100 people each. 2. These towns are distributed in space in such a way that within each size category the towns arc homogeneously distributed all across the region.”

Analysis of the Method

A Pattern Language sets a practical framework for designers to imagine and create the built environment at every scale. It provides examples of commonly found building patterns throughout our built environment and provides solutions to these patterns, though it does so without being overly prescriptive. Its method allows for multiple patterns to be selected and layered upon a project. Providing opportunities to create a design that has depth of spatial qualities and meaning. So it is a framework, but it’s flexible enough to not hinder design solutions.

Like any language, its usage can have a range of complexity depending on those applying it in their designs. Alexander likens this to a language used for prose or poetry. With prose employing one meaning and poetry providing a depth of meanings. Relating this to using the pattern language, stringing together patterns in a loose way can be considered prose while overlapping patterns to create depth of design can be considered poetry. Meaning, “compressing” patterns into the same space instead of creating singular spatial moments for each pattern. In addition to using multiple patterns to define the spatial qualities of a single room, the relationships between rooms also provide opportunities for design depth. Overlapping patterns as connective tissue between spaces.

However, like any language, the user must first

learn how to speak it before these opportunities will present themselves. While A Pattern Language defines 253 distinct patterns, which is considerably fewer than the roughly 600,000 words in the English language (Oxford Dictionary), each pattern is considerably dense in meaning. This density in meaning allows the method to be used in a flexible manner, however this density isn't necessarily helpful as a means to create a common language between a designer and a client. Many of the 253 patterns have descriptions, examples, solutions, and potential connections to other patterns that run many pages long. In total, A Pattern Language is almost 1,200 pages which can be seen as overwhelming for a beginner. Say, a new residential client. In an already overwhelming project such as designing a home, utilizing a communication tool that is itself potentially overwhelming could create more miscommunication instead of dispelling it.

As stated before, Alexander uses a confidence scoring system for all 253 of his defined patterns and their proposed solutions. These patterns fall under high confidence, somewhat confident, and no confidence. While this system helps build some confidence with the user of the language, it's based solely off of a small empirical data from Alexander's observations and his own work. This isn't to discount the value or accuracy of the proposed solutions, but it does call awareness to the potential for certain biases to exist within the dataset, especially for patterns that have been deemed "high confidence". As such, a cautionary approach is prudent when applying these proposed solutions on a project without testing and validating them firsthand.

Summary

"Certain architectural configurations, or patterns, survive simply because they have proven over time to be a good way to reconcile human needs, the laws of nature, the facts of the human body, and the materials at hand."

- Michael Pollan (A Place of My Own)

Using A Pattern Language as a collaboration tool has the potential to facilitate communication between designer and client for small and medium scale projects. It provides a designer a practical framework for designing everything from cities to buildings to specific ornaments within a room. It also provides a client a relatable design language through its use of commonly experienced patterns. In its current form it has limitations in the terms of its approachability for new clients without design knowledge. Specifically its density of pattern explanations and ambiguity of context. From the lens of the designer,

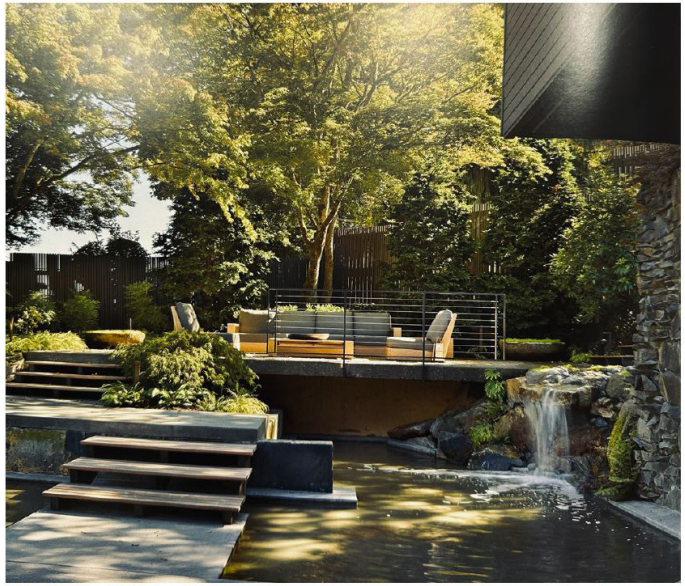
the evidence and explanations provided for each pattern build confidence in their validity while the ambiguity of context provides a freedom of design capability. While it is important for the designer to understand these elements it is not necessary to expect the client to have, or want, this level of comprehension.

Clients might not have design experience, but they do have life experience. Since A Pattern Language is based on design elements that are consistently found in the built environment, clients have a relatable understanding and connection towards these patterns. But in its original form, the language can be overwhelming. In order to use it as a collaboration tool to create a commonly understood design language, some modifications will need to be performed.

Modified Pattern Template

With consideration towards a Collaborative Method and creating a communication tool that is designed for both client and designer consumption the following modified pattern template was developed. Its goal is to utilize the robustness of A Pattern Language, but represent it in a way that allows anyone to connect with it without spending hours learning the language. This template distills Alexander's pattern template and layers on a Pacific Northwest context (though other contexts should be applicable as well). This was done due to the template being used to create patterns for a specific project that will be explored in chapter 6. Changes include a photo illustrating the pattern with a Pacific Northwest context, a simplified version of the pattern's definition, a simplified version of the pattern's problem, modifies some of the diagrams to fit within small and medium sized project contexts, and removes the paragraph that suggested ties to other patterns. While this template will be client facing, it is not designed to replace A Pattern Language. It acts merely as a companion.

Outdoor Room



The Dowel House, Seattle, Paul Hayden Kirk & Associates, 1954. Rennovated by Olson Kundig 2014.

A partly enclosed space that feels like an extension of the home. A place to sit, to eat, to gather, and to be still amongst the sun, wind, smells, and sounds of nature.

***

Outdoor living is an essential way of experiencing the majestic landscapes and temperate climate of the Pacific Northwest. But not all outdoor spaces can be considered outdoor rooms.

Outdoor spaces such as gardens and lawns are great for certain activities, but do not act as an extension of the home. They are separate places that are challenging to occupy as they are either large, exposed places or made for specific tasks.

Therefore:

"Build a place outdoors which has so much enclosure round it, that it takes on the feeling of a room, even though it is open to the sky."

Alexander, Christopher. A Pattern Language

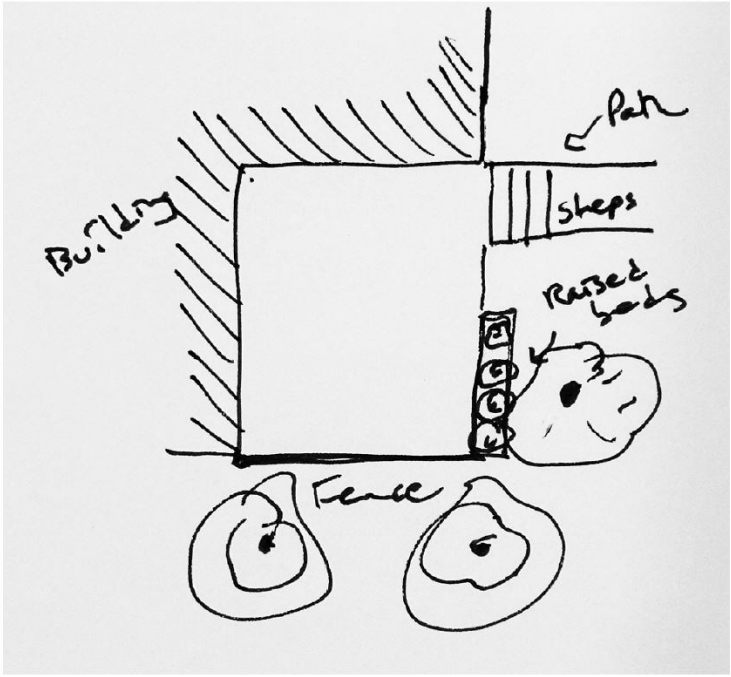


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Fig. 30 Example of a Modified Pattern, Outdoor Room

Chapter 5 ~ Methodology

The Collaborative Process

Now that the importance of effective communication through a common language and the design value of tangible, physical experience has been established, this thesis will attempt to integrate both of these ‘tools’ into a design methodology. Like other design methods, the proposed method involves the client early and often in the design process. The site will be visited, the client will state their desired program elements, and the designer will attempt to understand who the client is and how they will use the space. As the method is heavily dependent on client collaboration, the client is involved in the creation of the design language that will then be used to develop their project. Meaning, the client is presented with a core set of patterns that will work as a framework for the design and must approve of their selection. Spending time to help the client understand and accept these patterns as their project’s framework is crucial before progressing further into the method. To kick off the project, the design methodology is sent to the client and an initial meeting is scheduled. The collaborative design methodology sent to the client is explained in detail on the following pages.

----------Beginning of method document shared with client----------

The Client Collaboration Method

The following is the proposed methodology for elevating your engagement in the design process through means of experiential learning and discovery. This method believes that better design is created when both designer and you are actively engaged in the design process in a fun and experiential way. The method employs both theoretical (words, diagrams, drawings) and physical components in its process and is conducted mainly on your project site in a fast and flexible way. It is performed through a series of seven steps that continue to build upon one another. Layering depth of meaning to the design language that we will establish and will ultimately use to design your project.

The method begins with understanding you, your program desires, and your project site. It then works to create, through the development of a collection of design patterns, a common language[1] of communication between designer and client. It progresses with a physical, to scale object(s) that allows you to experience the core ideas of the design directly on the site before construction begins. The method "ends" by photographing you within the pattern/object relationships to create hybrid illustrations. With the goal of spatially representing potential concept designs.

Expanding on the physical component of the method, the goal is to:

1. Establish a common language foundation using the modified pattern language template and a selection of core patterns.
2. Use that language to inform and build a physical object/structure that you can experience and relate back to the core patterns of your design.

The goal is to create an experience that allows you to interact with your project in a sensory way. For example, experience the lighting qualities of an idea, the tactility of certain materials, and the space created by certain patterns.

Early in the design process, the physical object will focus on the core patterns of the design language selected. In other words, the "main ideas" of the project. As the design progresses we will begin to layer on more patterns to enhance the depth of the project.

An outline of the steps of the collaborative design process proposed:

1. Initial meeting ~ Designer and client discuss initial program elements and design ideas
2. Designer and client walk & experience the site together
3. Designer creates a set of "Core Patterns" based on the site, the client, and the program. These patterns will act as the common language. Designer and client meet to review initial patterns. Iterate if necessary.
4. Go back to the site and use the patterns to set a loose plan marked with string, flags, etc. with the client. Change pattern/layout based on conversation with client.
5. Designer uses the Core Patterns and layout to design and construct an object(s) to be erected on the site.
6. Erect the temporary object/structure on the project site. Experience the object(s) with the client and discuss how it relates to the site, program, and themselves. Iterate if required.
7. Photograph the objects on the site and include the client for a scale reference. Create a hybrid concept drawing set depicting the built objects integrated into a concept design. Incorporate the selected core patterns as well as additional detail patterns the client has selected.

The Common, Pattern Language[1]:

Pattern (n): A set of movements, shapes, or colors that are repeated regularly.

"The word pattern comes from the Latin word 'patronus' meaning 'defender, advocate, model'. In English, the word eventually became 'patron' meaning 'a model to be imitated'. This is where the modern meaning of the word pattern is derived from."

-Macmillan Dictionary

In the case of architecture, a pattern describes a common design element which occurs over and over again in our environment, such as a "main entrance" into a building or the use of "courtyards" or "gardens". This method uses patterns like these to not only define certain design elements but to also provide solutions in their application. The initial selection of patterns is determined by the core design ideas of the project. The number of these core patterns can vary depending on the scale of the project, but should be kept reasonable. Around 3-6 in total. An example of one is shared (see Figure 30).

[1]This language is based on Christopher Alexander's A Pattern Language, but simplifies it and applies a local context.

Below is a list of other potential Modified Patterns to use in the design process of your project:

- Wings of Light
- Living Kitchen
- South Facing Outdoors
- Main Entrance
- Entrance transition
- Woodshop Wonder
- Pickleball Play
- Watery Lights
- Car Connection
- Sunny Place
- Sunny Counter
- Building on Piers
- Hazy Maritime Light
- Long Summer Days
- Western Winds
- Mountain Views
- Water Views
- Post & Beam Structure
- Roof Garden
- Flexible Office Space
- Indoor Sunlight

This is not an exhaustive list and more may be added as the project is further developed. These patterns will then be used as frameworks to design and build an object for you to experience or a structure that you may stand inside of.

The Physical Object

The built objects/structures are dependent on what the selected patterns will be used as a way to experientially interact with the patterns and the relationships they create on site. The objects/structures will be at full scale and will attempt to embody the core ideas of the project.

The Hybrid drawing set

A hybrid concept drawing set will be created using a digital workflow with the goal of depicting the built objects integrated into other elements of the house design. Photographs will be taken to incorporate the selected core patterns as well as additional detail patterns you have selected. You will be included in the photo to represent your own body within the scale of the illustration. Your body within the photo acts as a bridge between where it was taken, the scale of the built objects and their relationship to the patterns, and the scale of the sketched

Fig. 31 Potential Program Profiles. From top to bottom; garden pavilion, farm stand, yoga studio

design. Anchoring you to them, these act as a sort of hybrid scale model. Because it is digital this hybrid illustration is easy and efficient to make. It's also easy to share and change. It builds upon the patterns and objects into a visual, built space that you can "feel" based on your on-site experience.

----------End of method document shared with client----------

When to use the method

Like any other tool, there is an appropriate way to utilize this Collaborative Method to extract the most value from it. There are specific client and project profiles that lend themselves to this method's strengths and should be considered prior to proposing its use. The following four selection criteria can be used in evaluating whether a project could effectively implement this method: (1) Client profile, (2) project profile, (3) design implementation phase, and (4) potential for on-site client design sessions.

As this method involves sensory experiences that are highly personal, the client should be someone who will be personally using the project. They should be someone who wants to be intimately involved with the design process, desires a heightened understanding of scale,

and desires a deeper understanding of their design on a sensory, experiential level.

Because of the sensory experience, projects that benefit the most from this method are ones that intimately involve the owner with the senses. Specifically, small to medium scaled projects that are enhanced by accepting sensory forces into their designs. Forces such as natural lighting, views, structural rhythms, shading and thermal properties, material textures, sensual aromas, etc. A collection of some potential projects that could benefit from this method are illustrated in Figures 31 & 32.

The Collaborative Method relies heavily on a commonly understood language for effective communication to be established. And it is imperative that this occurs early in the design process, specifically this method is conducted in concept design. The goal is to use simple patterns and objects to create a foundational understanding of the client's project and to work towards a three dimensional representation of the design concept. Such as a concept sketch.

The Collaborative Method relies heavily on sensory experiences and therefore is predominantly conducted on the project site. This allows the use of our bodies, our skin

Fig. 32 Potential Program Profiles. From top to bottom; artist studio, carriage house, single family residence

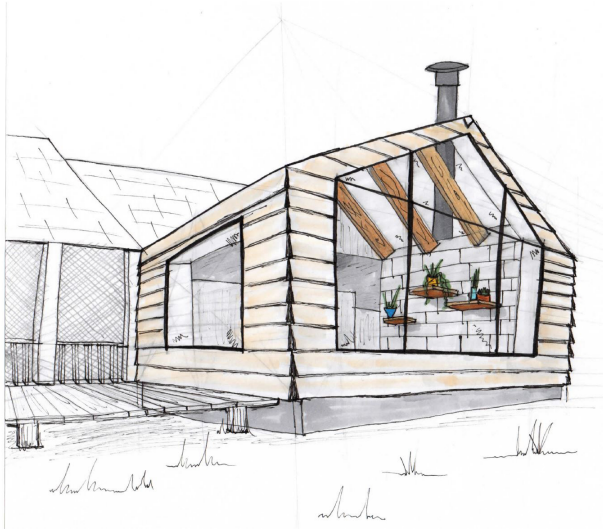

Fig. 33 Example of a concept sketch

Fig. 34 Site photo of theoretical project in Vermont

to communicate with the sensory qualities and constraints that are unique to each project site and provides the potential for an elevated understanding of the project's design.

Chapter 6 ~ Implementing the Method

With the Collaborative Method defined it will be implemented into three projects at varying degrees of detail. Each of these project profiles have been previously identified as candidates who may benefit from a sensory and full scale exploration in collaboration with the client. This chapter will explore how each project can be designed by using the Collaborative Method and will begin with the smallest project by scale and scope. Each successive project will expand in terms of both architectural scale and the depth to which the method was implemented.

Project A ~ A Garden Pavilion

The first project is the smallest of the three in scale and scope. It will focus on the simple application of the Collaborative Method for a project of this size.

The Client & Project

The first step of the Collaborative Method is to establish client, project and site profiles. The client is a homeowner that is looking to create an outdoor pavilion in their backyard. An existing platform already exists and

Fig. 35 Site location of garden pavilion project

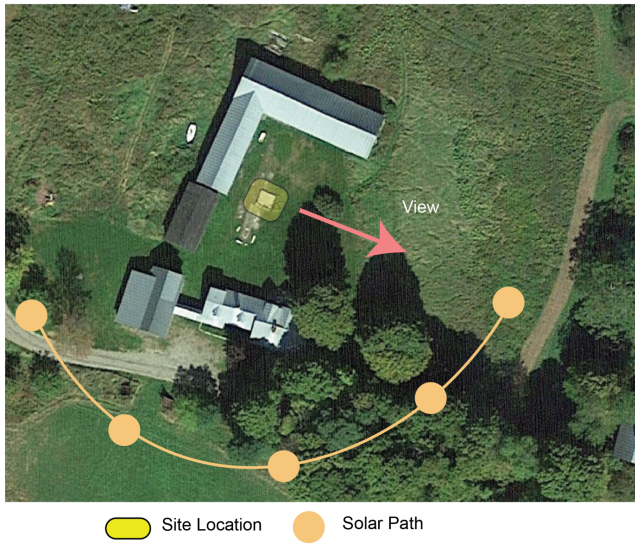

Fig. 36 Site diagram of garden pavilion project

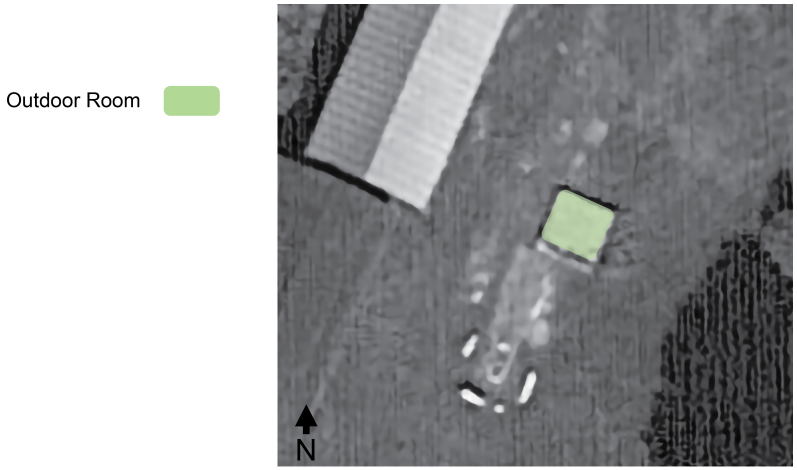

Fig. 37 Pattern Language layout diagram of garden pavilion project on site

they are considering building an open structure that acts as an outdoor living space and takes advantage of the view (see Fig. 34). The structure will include a roof so the space will be somewhat protected from the elements. The space will be used for dining, dancing, movie watching, and other fair weather activities.

The Site

The project is located on a rural property in Norwich, Vermont. It is located on a hill above the town and looks east towards the Connecticut River and Hanover, New Hampshire. The platform that will act as the foundation for the project is centrally located in the client's backyard. Between the house and an L-shaped timber framed barn which create a courtyard space on the property.

Core Pattern Language Selection & Site Layout

After establishing the client, project, and site profiles the method then creates a common language of communication between designer and client through the Modified Pattern Language shown previously. For this project, the client is asking for a modified Outdoor Room Pattern (see Fig. 30). This pattern is shared with the client to help define the project's core design goal and establish

the design language. This acts as the foundation for the design to grow from.

The Collaborative Method would progress with a site visit with the client and would begin to physically lay out, with flags, where the core design pattern would be located. Using the pattern and project profiles as guides for the project, the design would focus on views and a place to gather and would search for locations that serve these goals. However, for this project the platform has already been intuitively selected by the client as the best location because of its views and proximity to both the house and barn.

Once this pattern has been laid out on the project site the designer will complement it with a selection of built, full-scale objects that will be assembled and experienced on site and represent the scale of the project. These will be designed to heighted the client's understanding of the core pattern's goals. As the client has requested a roof for their Outdoor Room a structure is required to support it. The structure can also be used to generate a sense of enclosure and frame the view. Having a full scale object that helps the client experience potential options of these design elements could prove beneficial. The objects can be simple in nature as long as

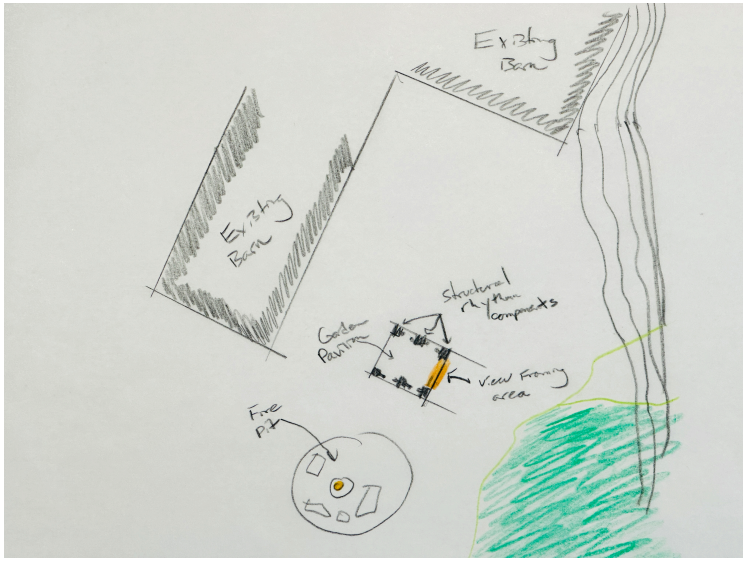

Fig. 38 Concept diagram of potential pattern/object relationships

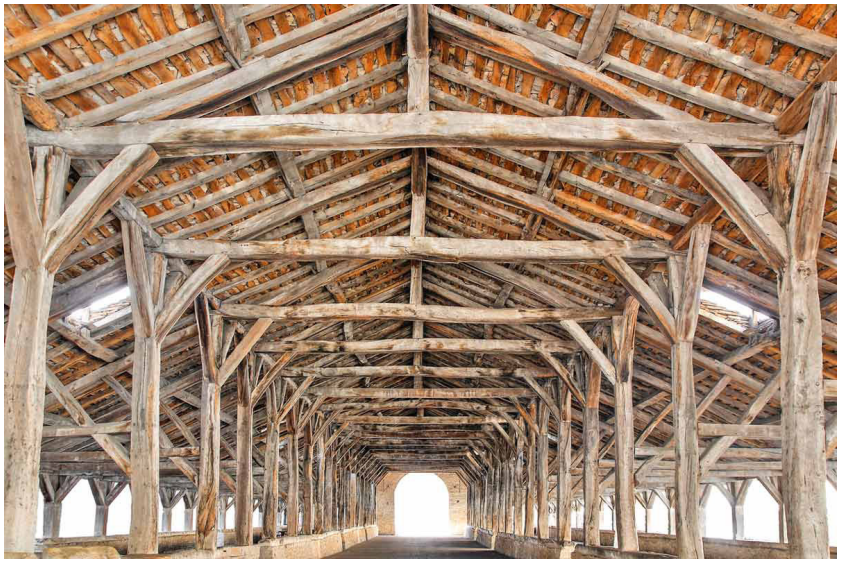
Fig. 39 Example of timber framing used as inspiration for the built object

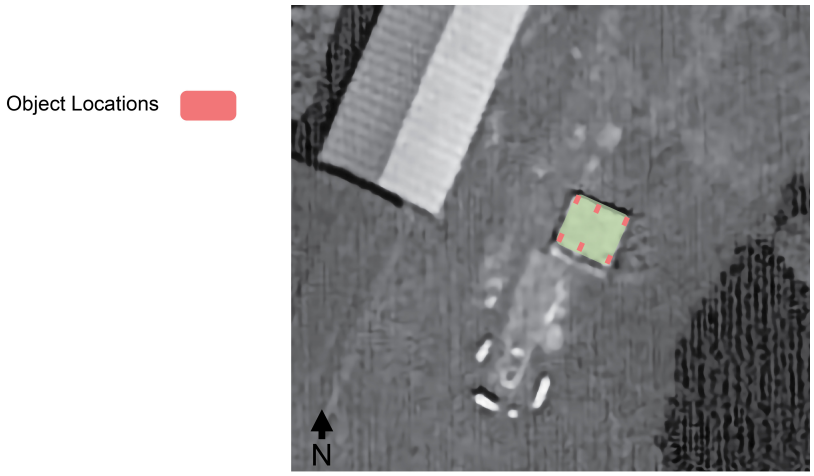

Fig. 40 Diagram of full scale object potential locations

Fig. 41 Project A hybrid sketch

they effectively represent the core pattern in a physical, experiential way.

Using the timber framed barn's structural rhythm as inspiration, different sized timbers could be temporarily erected along the perimeter to proxy for both views and enclosure options at scale that the client can respond to. These timbers could also be erected at different heights to provide options of roof positioning. While it sounds like a simple exercise, this process allows the client to fully appreciate the proportions of their design at scale, albeit in a diagrammatic way. Using a tape measure to register certain lengths, heights, and rhythm lengths between timbers elevates the client's understanding of the spatial qualities of their project. However, it isn't required to erect the entire structure this way as this would be costly and time consuming. The next step of the method uses an efficient digital process that builds upon the physical experience thus far. This continues the method's theme of "fast and flexible".

Hybrid Sketch

Once these timbers are erected in a way that the designer and client finds agreeable the designer will take a photo making sure to include the client within it. This

photo will be used as a base image for a hybrid illustration that represents what the design could look like in its entirety. Having partially experienced it, especially its scale, the client has been anchored within the illustration and can "feel" what the built space's qualities could be. Such as its relationship towards site elements like sun, winds, rain, and views. Relationships that a visual drawing on its own struggles to represent.

Fig. 42 Site photo of theoretical project in New Jersey

Project B ~ A Yoga Studio

The second project looks to expand the method's depth of application used in Project A. Specifically, its application when the scale of the project increases and utilizes multiple patterns.

The Client & Project

The client is a yoga teacher who wants to build a detached yoga studio for movement and meditation sessions with students next to her home. The building will be a small structure with room for up to 10 individuals and will be predominately lit by natural light. The client also wants to capture the zen views from the site, especially the wondrous sunsets that commonly occur.

Fig. 43 Site location of yoga studio project

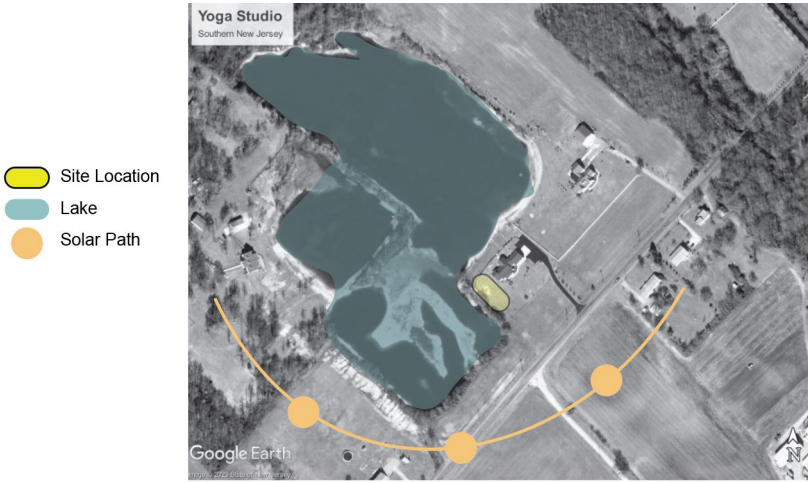

Fig. 44 Site diagram of yoga studio project

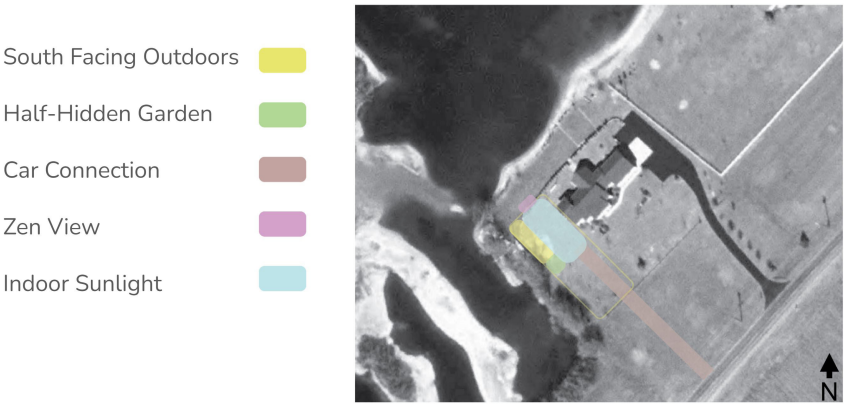

Fig. 45 Pattern Language layout diagram of yoga studio project on site

The Site

Located in Carney's Point, New Jersey. This project is situated in the southwest corner of the state and resides next to a small lake that runs its western perimeter. Creating a setting for wonderful sunset views that the client wants to capture. The site is flat and includes the single family residence of the client to the northeast of where the project will be constructed. Privacy between the project and home are important to the client.

Core Pattern Language Selection & Site Layout

Following the same process as in Project A, the method then creates a common language of communication between designer and client through the Modified Pattern Language shown previously. Core values for this project are natural lighting, views, and a calm sense of space. Using these as guides the following patterns were selected: (1) South Facing Outdoors, (2) Half-Hidden Garden, (3) Indoor Sunlight, and (4) Zen View. These patterns are then physically laid out on the site with the client through the use of flags. Allowing the site, and our senses to help guide where they should be placed.

Early Concept Sketches of Built Objects

Once these patterns have been laid out on the project site the designer will complement them with a selection of built, full-scale objects. The purpose of these objects is to elevate the client's understanding of scale, such as the size of a door or window. It is also to allow the client to play with the position of these elements directly on the site to deepen their awareness of the pattern/object relationships that will ultimately turn into a built project. For this project, emphasis was placed on sun & views so built objects should help in the discovery process of these elements.

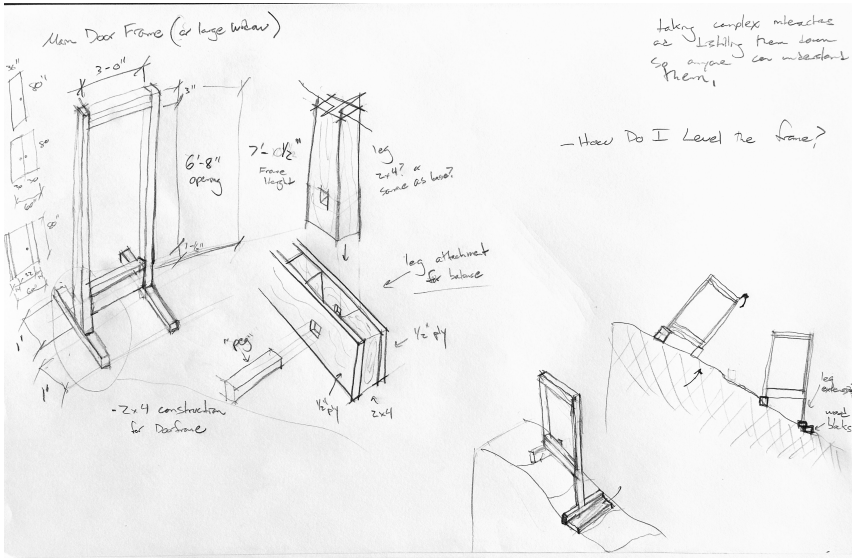

Fig. 46 Concept sketch of built frame

To help the client further define their patterns, such as their Zen View, a full scale frame that mimics a potential window could be built. The Concept Sketches shown here are of a solution to a frame for either a door or window that can be moved about the site to "capture" these views.

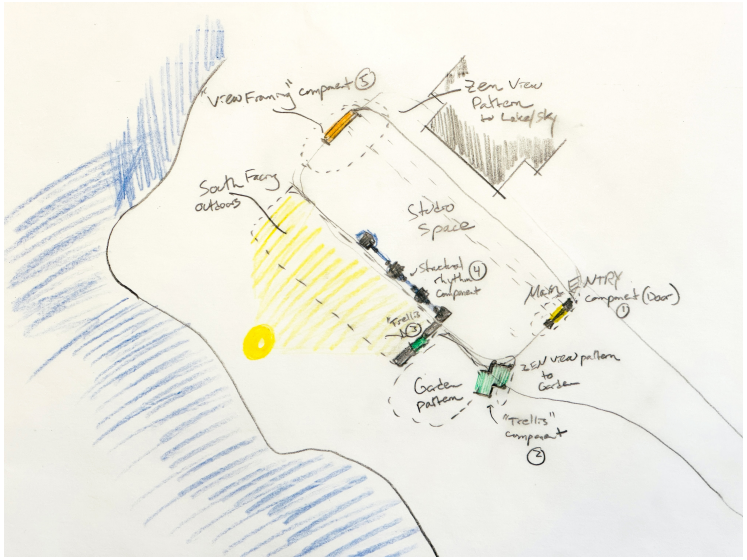

Fig. 47 Concept Diagram of potential pattern/object relationships

Placement of Built Objects

Once constructed, These built objects would be erected on site for the client and designer to experience together. Relating their positions on site to where specific patterns have been established. And moving them around

Fig. 48 Diagram of full scale object potential locations

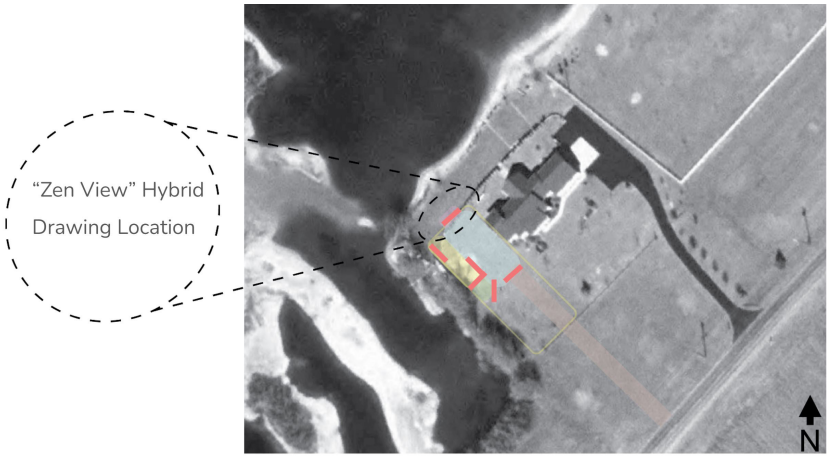

Fig. 49 Zen View Pattern location

the site depending on how they could relate to the core patterns already laid out. For example, placing a built frame within the Zen View pattern in the northwest corner (Fig. 49). The frame would be placed here to capture what the view may look like from within the yoga studio.

Hybrid Sketch

To illustrate what this might look like, a photo will be taken at the location of where the frame would be positioned on the site. In this situation, the built frame capturing the Zen View would also be within the photo. The client would be included in the photo to anchor themselves within the scale of the illustration and its orientation. This photograph would then be used to create a digital concept sketch such as the one shown in Fig. 51.

The back window shown in the image is drawn over where the built frame theoretically would be erected on the site. Allowing the client to not only see the view, but sense specifically where it will be. Because they've already been there. For this project, they understand the western winds blowing over the lake, bringing a damp coolness with it. They appreciate the beautiful view captured through the built frame, but they also understand the intensity of the sun on their skin. Because they've already experienced

it, they have a heightened realization of the tradeoffs of having too much of this western sunlight and how its glare and heat could detract from the calm and meditative qualities that they desire the project to exude.

Fig. 50 Photo from Zen View Location

Fig. 51 Hybrid Illustration from Zen View location

Fig. 52 Site photo of theoretical project in Washington state; facing east

Project C ~ A Single Family Residence

The third project was fortunate enough to have someone local who was interested in experiencing and testing this method on a deeper level than the first two exploration projects. Over the course of two months we would work through the Collaborative Method together, conducting each step of the process. At least one week was dedicated to each step to allow time for initial testing, critique, and experimentation on improvements. Each week the client and designer would meet on the project site and perform that week's step of the method while the rest of the week was dedicated to designing and planning, by the designer, deliverables for the next step. The entirety of this collaboration can be found in Appendix E.

The Client & Project

The client is a single gentleman with two grown children and a grandson. He works as a grant writer, enjoys the outdoors, gardening, and his Tesla Model 3. He is an avid woodworker who enjoys his fully equipped woodshop in his current basement (though he wishes he had space for a jointer). He also enjoys playing pickleball and hosting small parties. Weather permitting, he prefers to spend most of his time outdoors. While indoors, he

notices he spends most of his time hanging out in his kitchen. Creating a buffer zone between the public street and his private residence is important to the client. He's expressed a desire to use this space as a means to shed away the worries of his day when returning home.

The project is a single family residence which will be roughly 2,000SF and is located directly behind the client's current residence. The client would like for the project to capture the western views and allow him to spend as much time living outside as possible. Further client & project profile information can be found in Appendix C.

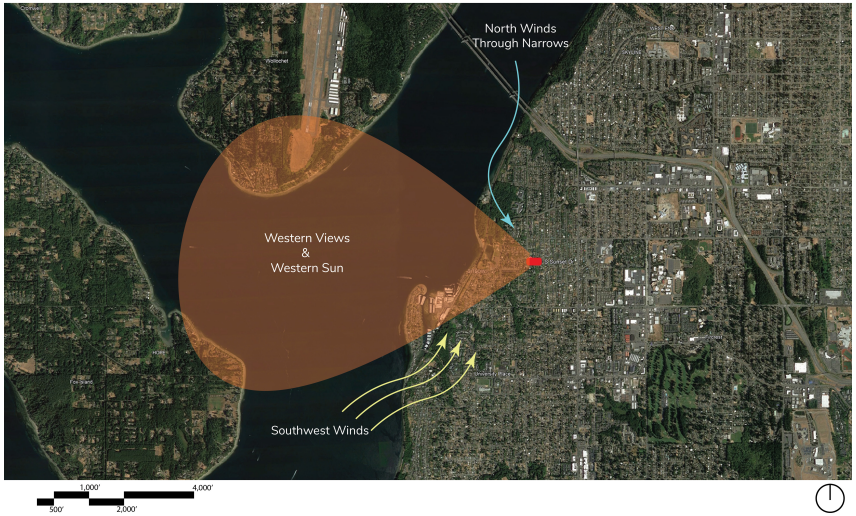

Fig. 53 Site diagram of single family residence and major site forces

The Site

Site Location: Tacoma, Washington
Site Orientation: E/W

The site is located in a quiet residential neighborhood that overlooks the Puget Sound just south of the Tacoma Narrows. It enjoys expansive western views, but has close neighbors on all four sides of the site. The site is fairly exposed to southwest winds, western sun, and has access to multiple viewpoints of interest. The site is set back from the road and will thus have a long driveway for access. It also has a moderate grade of 12% sloping

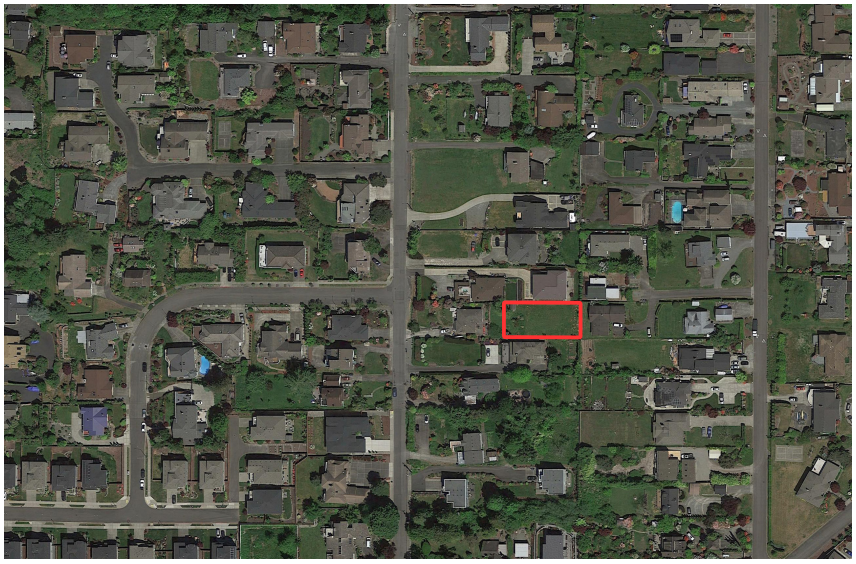

Fig. 54 Aerial view of site & neighborhood

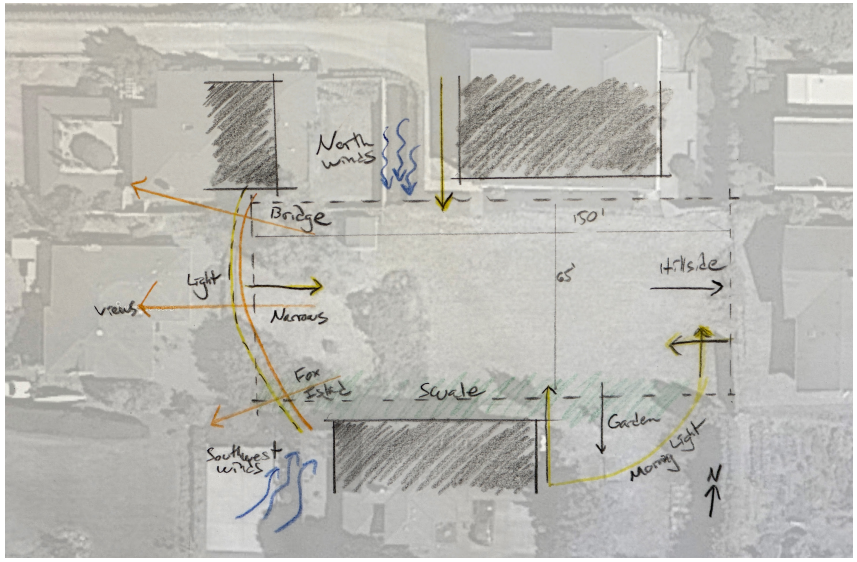

Fig. 55 Site analysis diagram; project C

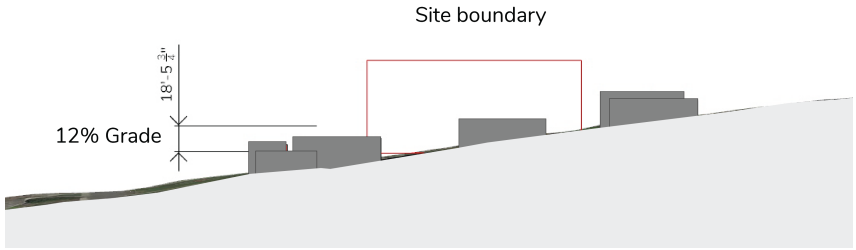

Fig. 56 Site section; project C

westward.

A site walk (Step 2 of the method) is performed with the client during the first meeting after establishing the client and program profiles. This allows for the client and designer to discuss initial ideas directly on the site early. Through direction from the designer, it also allows for both to experience the sensory qualities of the site. Keeping in mind what the body feels and hears in addition to what it sees. This particular site is exposed to both winds and sun. Site qualities that were intensely felt over the course of the two month process.

Core Pattern Language Selection & Site Layout

After the site walk the designer will take this knowledge and the project profiles and create the Core Patterns using the Modified Pattern Language (Step 3 of the method). For this project, views, transition spaces, outdoor living, and a livelvy kitchen space were core design ideas and important to the client. These core design ideas, which were defined from the client and program profiles, were coupled with the site profile to establish four Core Patterns for this project: (1) Entrance Transition, (2) Main Entrance, (3) Living Kitchen, and (4) Outdoor Room. These Core Patterns act as the root language for a design to

Fig. 57 Site photo facing East. Taken during site walk with client

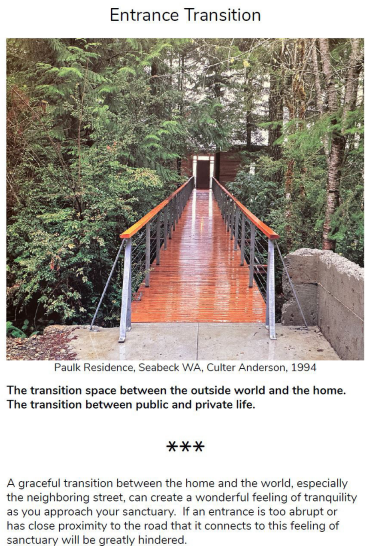

Fig. 58 Excerpt of the Entrance Transition Pattern using the modified pattern template

Fig. 59 Laying out the core patterns on site with orange flags

sprout from. Their full descriptions are located in Appendix D.

As the design progresses the idea is to layer on more of these patterns to create a deeper design language. Layering them in a way that their relationships create a sense of poetry instead of simply having adjacent patterns. Once these Core Patterns have been created and shared with the client, and approved, they are physically laid out on site (Step 4 of the method). This exercise is designed to help the client physically understand rough sizes, positions, and relationships of each pattern in a fun and engaging way. Brightly colored flags are used to mark pattern locations and their corners. A tape measure helps set rough dimensions.

The designer leads the exercise with pre planned pattern sizes and locations, however the client's site experience and comments allow these elements to be flexible. The purpose is for both designer and client to gain a common understanding of where these core patterns should be placed based on their physical experience through the exercise. As the flags are easy to move changes can be made in the future if both designer and client deem it necessary. Once the core patterns have been laid out they are mapped out in plan view for the client to

respond to. One thing to note is that we aren't yet focused on the form of the project, or the program in its entirety. Those will come later as we layer on more patterns. Right now we are just establishing the main focal points of the project.

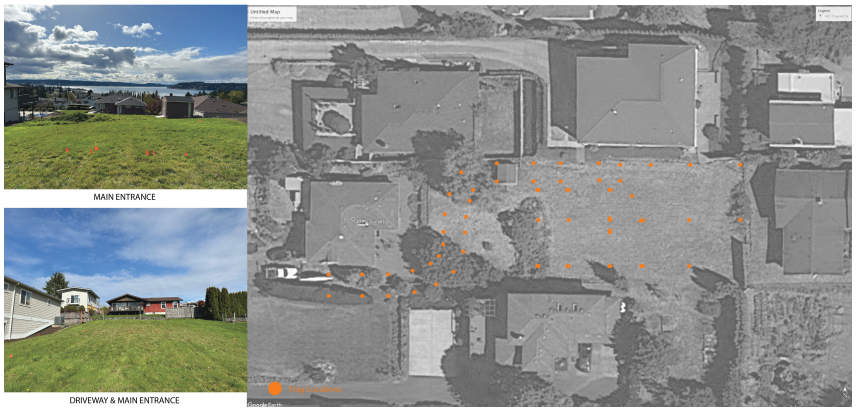

Fig. 60 Location of flags

Built Objects

Now that the Core Patterns have been laid out on the project site Step 5 of the method looks to further enhance our discovery by building full scale objects. As was conceptually explained in projects A & B, these full scale objects are intended to help the client with scale and orientations of design elements and their relationships with each other through a tactile experience.

Taking inspiration from the Veneer House system the designs will be simple to assemble on site by anyone with simple tools. Based on the previous steps for this project, views, privacy, and shading are high priorities for the client. Having full scale objects to help test these relationships may prove beneficial. Focusing first on views, a flexible framing system that specifically allows for different sized apertures was created for this project. However, because of the system's "kit of parts" nature, it was expanded to allow for other components to be incorporated. Such as

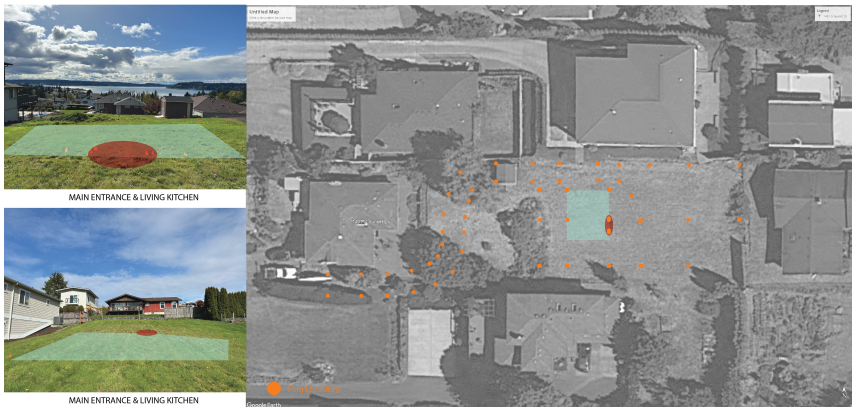

Fig. 61 Main Entrance & Living Kitchen locations

DRIVEWAY

ENTRANCE TRANSITION

MAIN ENTRANCE

LIVING KITCHEN

OUTDOOR ROOM

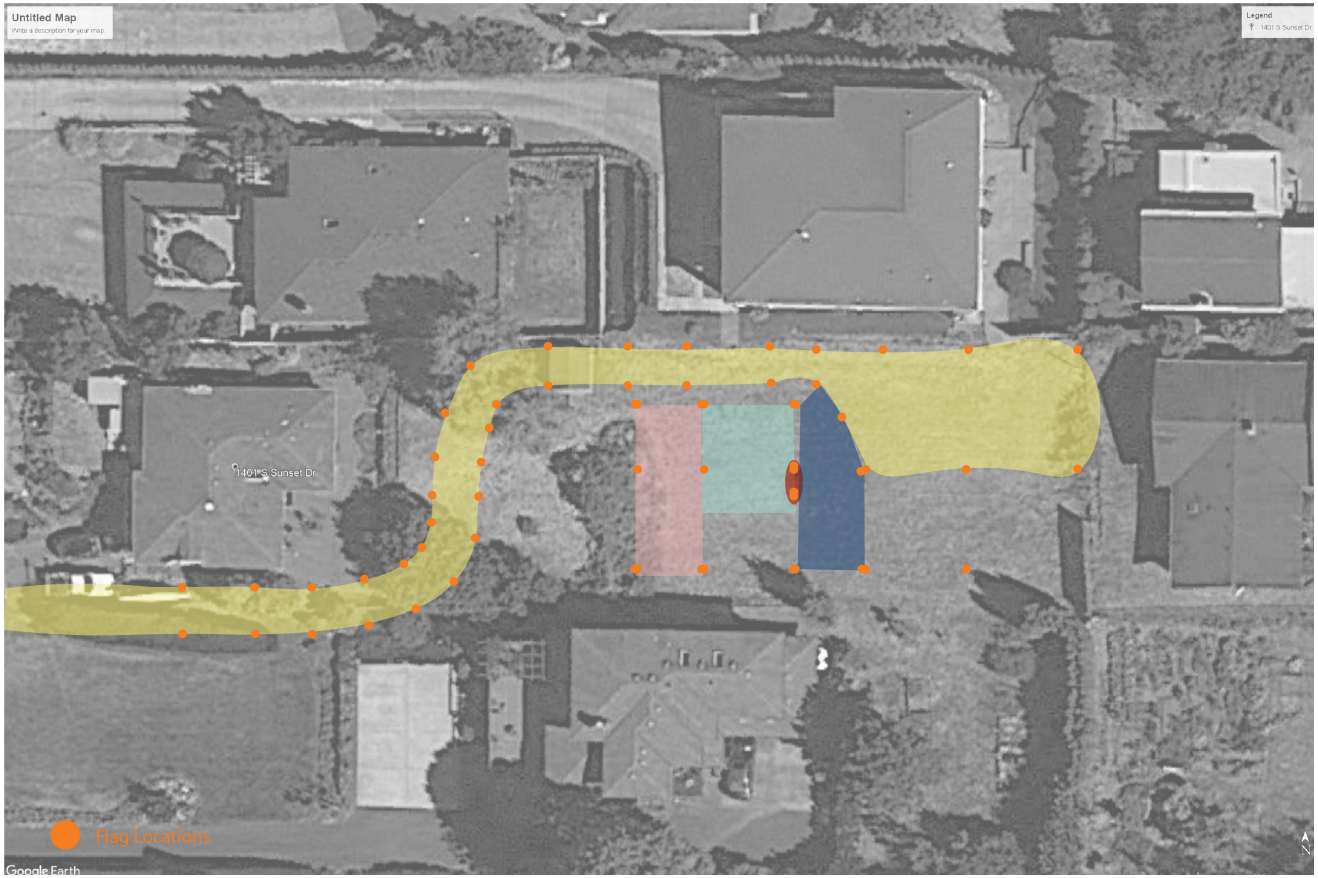

Fig. 62 Full layout of Core Patterns on-site

privacy and shading devices.

A simple mortise and tenon joint is used throughout all built components for easy assembly on site (Fig. 66). It only takes a minute or two to set up a frame once it's leveled. And is easy to take down and disassemble. The main components of the Flexible Framing System are: (1) Base assembly to support the frames/components, (2) Horizontal assemblies that vary in length to allow for different sized apertures that will help with viewfinder and positioning building elements, (3) Uprights & lateral bracing that will attach to the base assemblies and will accept any built components, and (4) a platform to differentiate between "built" space and outdoor environment. Ancillary built components specific to this project were shading and privacy "walls" that attached to the FFS.

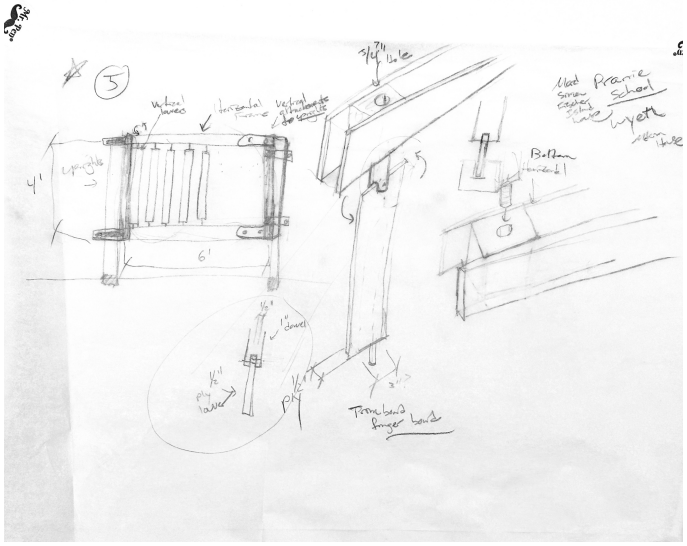

Fig. 63 Concept sketches of shading component for FFS

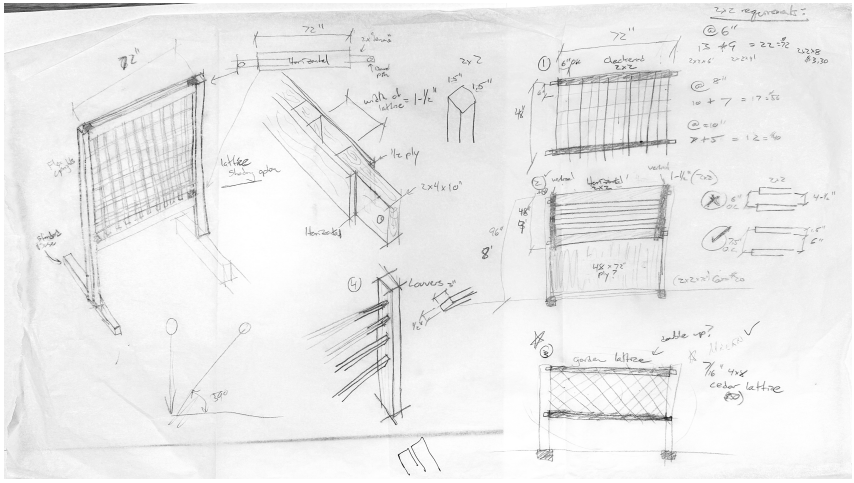

Fig. 64 Concept sketches of privacy components for FFS

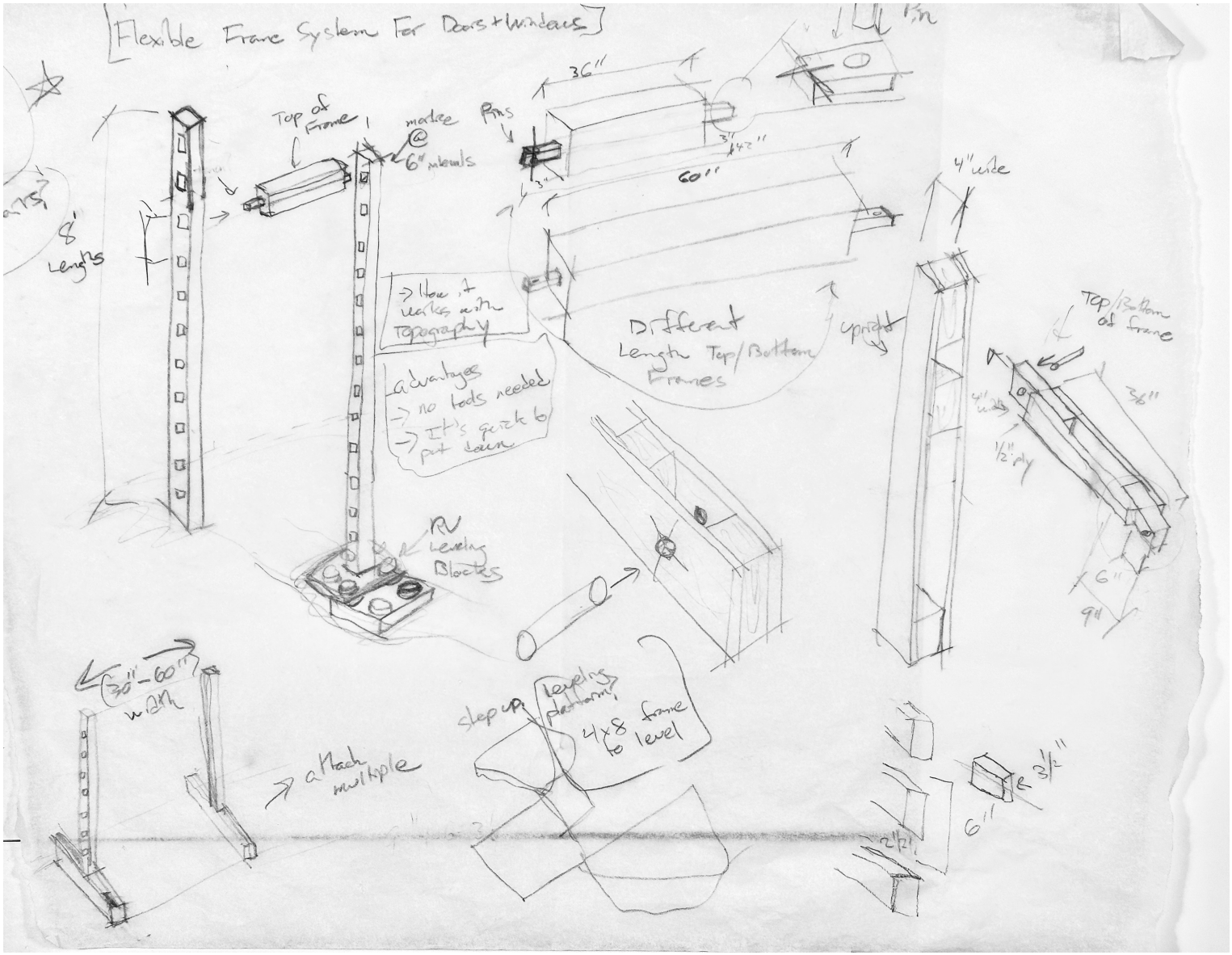

Fig. 65 Concept sketches of Flexible Framing System (FFS)

Fig. 66 Flexible Framing System (FFS) components clockwise from top right: mortise and tenon joint w/dowel, Base frames w/mortise in the center, Horizontal assemblies at different lengths, tools for assembly: Tape measure, mallet, dowel

Fig. 67 Upright & lateral bracing attached to base assembly for FFS

Fig. 68 Platform w/ base assemblies for FFS

Fig. 69 Privacy wall testing multiple designs for FFS

Patterns & Objects On-Site Discovery

With the full scale components built they can now be erected on the project site (Step 6) to help with design discoveries in relation to the Core Patterns already laid out. Setting the stage for the remainder of the method. This step is where both client and designer get to experience the Pattern & Object relationships and discuss how it relates to the site, program, and themselves. It's goal is to allow the client to use their body on their site to interact with full scale design elements, and their Core Pattern locations, in an experiential way. With the intent to elevate their understanding of their design and the language being used by the designer to convey it. While also conveying scale and position of design elements.

One of the first things explored was what the views from the main entrance would be. The client was concerned if his views would be obstructed by neighbors. A simple question to answer conceptually through a site section drawing, however the value in answering it on-site is it allows the client to answer it in reality instead of proxy. In application, the client and designer assembled an aperture the size of the front door located at the Main Entrance pattern.

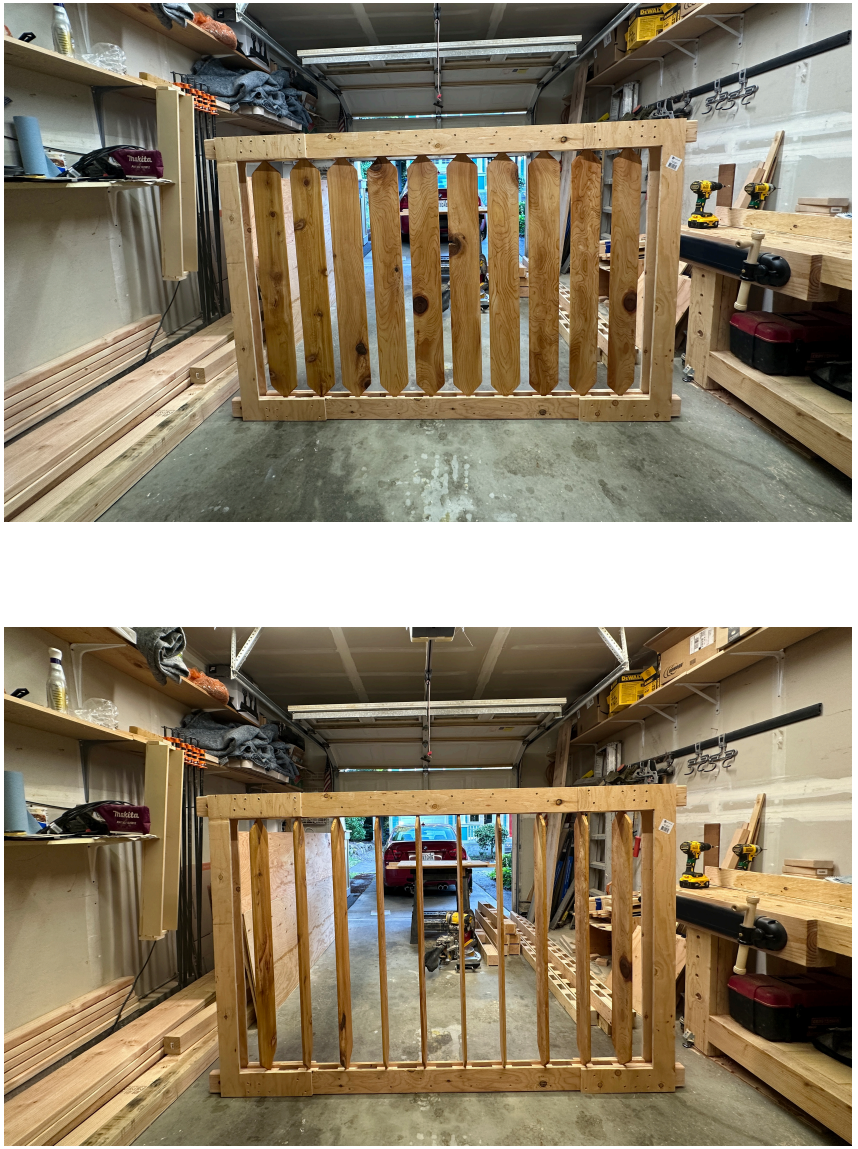

Fig. 70 Shading wall for FFS. Closed (top) and open (bottom)

Fig. 71 Finding the elevation of the main entrance floor plate

Because of the topography the frame that was erected to mimic the Main Entrance was estimated to be seven feet lower than where the desired height would be (this was estimated through a site section drawing), another frame was assembled at its estimated elevation. This second frame was located up the hill and its bottom horizontal was made planar to the north neighbor's second floor. This sets the desired elevation register. The top horizontal of the Main Entrance frame was made planar to the bottom horizontal of the register to find the estimated floor plate location. Using the top frame as the proxy for the view from the Main Entrance showed that it would enjoy an unobstructed view (Fig. 71).

In summary, this exercise was a validation of the site section drawing. Importantly, it was a trust building moment with the client and the designer. This confirmation alone was worth the time and effort to this particular project. It also allowed us to use our bodies, standing next to the Main Entrance frame, to understand how much higher it would be than the current topography. Which brought further questions as to how this would be accomplished.

Each of the Core Patterns were tested using the FFS. Apertures, shading, and privacy components were assembled depending on each Core Pattern relationship to the site and each other. For example, a corner of the Outdoor Room pattern was tested using both privacy and shading components built around the platform. As stated before, the platform helped greatly in establishing what was built space and what wasn't. The client expressed their appreciation of this distinction early on. A simple application, but one with effective results on communicating an idea. A common thread throughout the entirety of the method.

Fig. 72 Testing an Outdoor Room Pattern object relationship

Relationships between adjacent Core Patterns were also tested. These relationships are important components in generating the hybrid illustrations in the next and final step of the method. For example, the relationship between the Outdoor Room and Living Kitchen was tested with a 6' aperture (proxy for a sliding door) and privacy screen (Fig. 73). We continued testing more of these relationships until we had experienced all four Core Patterns and a few Pattern relationships such as this one.

Fig. 73 Testing an Outdoor Room/Living Kitchen Pattern relationship

Fig. 74 5’ aperture frame at Main Entrance Pattern location

Fig. 75 Using two frames to test elevations

Hybrid Sketch

The capstone of the Collaborative Method is the creation of hybrid sketches that illustrate the language created throughout steps 1-6. These sketches build upon the Core Pattern and object relationships and test potential design directions for the client to respond to. Meaning, layering potential architectural elements over what the client has already physically experienced. To create something spatial to expand upon their haptic memory.

Expanding on the concept shown in the earlier projects, these illustrations will include the client and the built objects, anchoring the client to the scale of the drawing, within a photo depicting a certain pattern or relationship. These illustrations are represented as a triptych (Figs. 76-79). Firstly, the photo will be shown to help orient the client what the sketch is representing. Then an outline sketch will be layered over the photo. Finally, the sketch will take form and depict what type of space the pattern or relationship could look like.

Using the built frames (FFS) as guides for both locations and scale of potential building components, hybrid illustrations were created of what a design might look like for that specific pattern. Some of which included their relationship to another. For example, the Entrance Transition hybrid sketch includes where the Main Entrance may be located. These illustrations are presented to the client in the same order as they would actually experience their project. Moving from the Entrance Transition, through the Main Entrance, and into the Living Kitchen. These sketches look to tell a story of how the Core Patterns and objects come together. Physically placed on the site with the client's body and experience anchoring each view. Until the client ends in their desired Outdoor Room with a deeper understanding of how they got there. To allow the client to experience their story, not just see it.

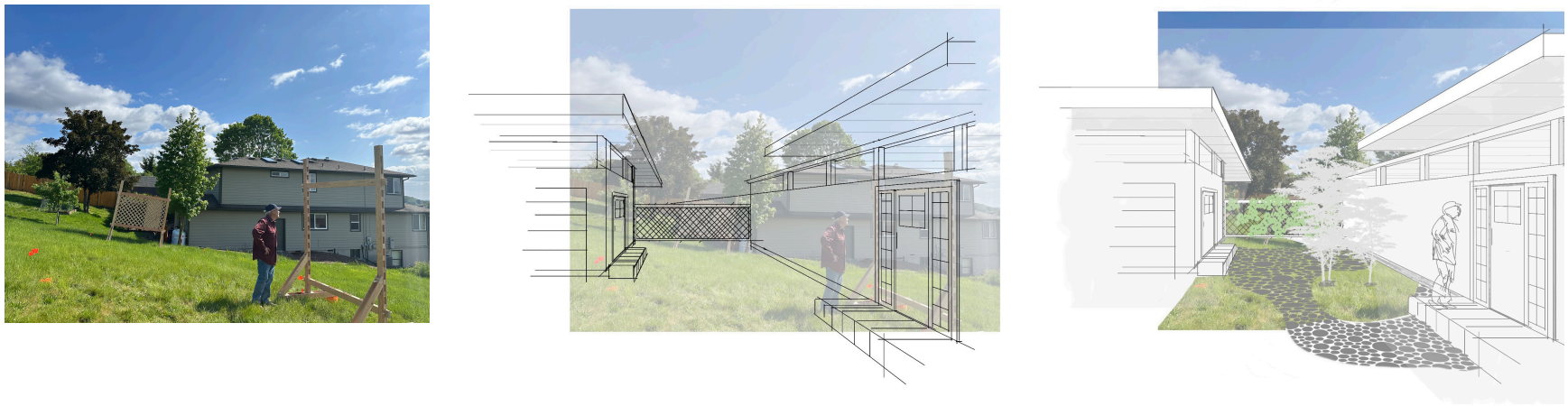

Fig. 76 Entrance Transition/Main Entrance Hybrid Triptych

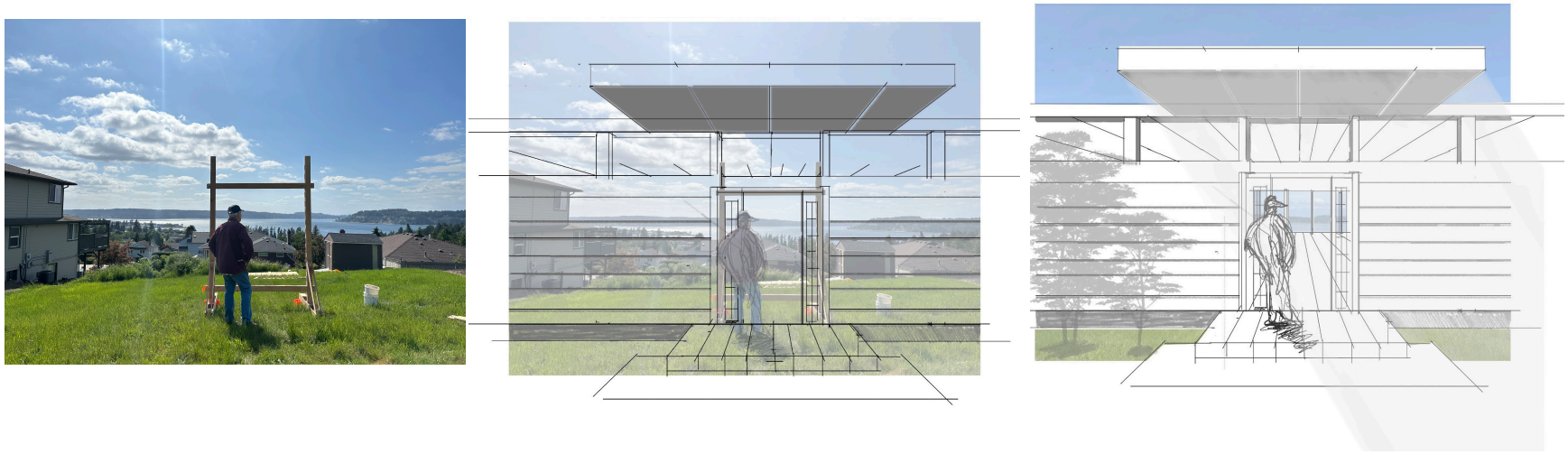

Fig. 77 Main Entrance Hybrid Triptych

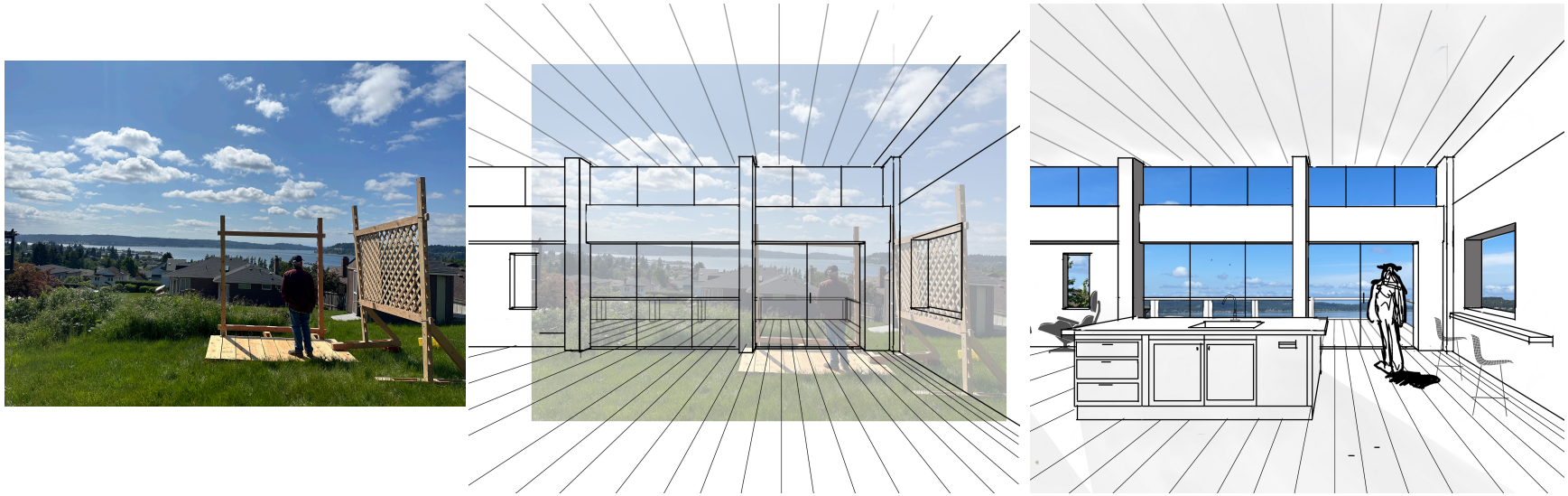

Fig. 78 Living Kitchen Hybrid Triptych

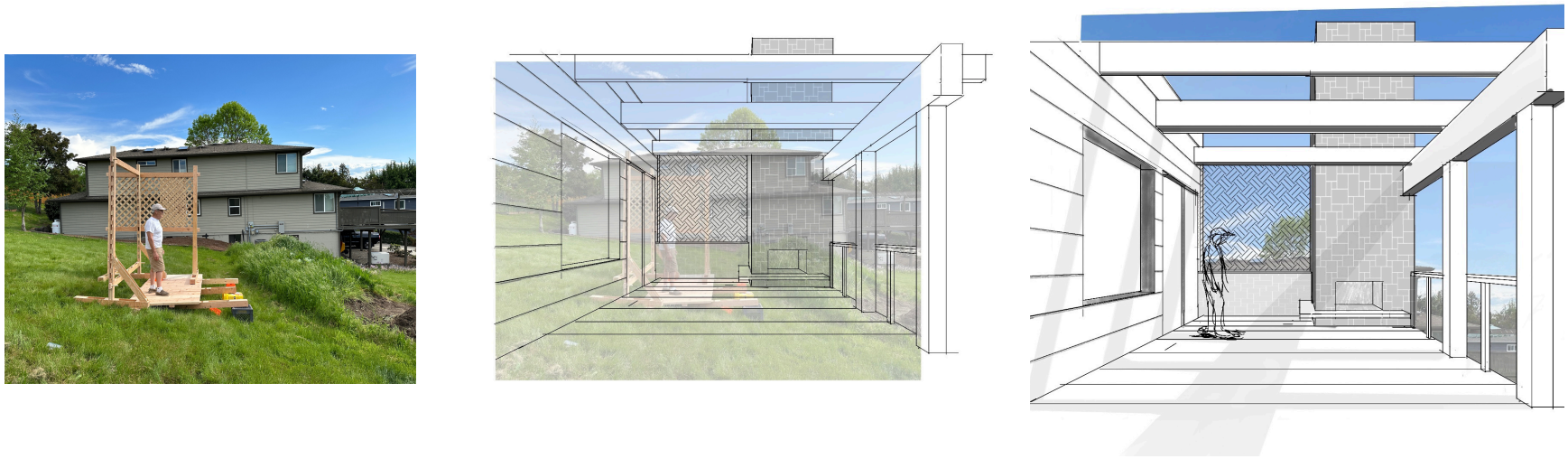

Fig. 79 Outdoor Room Hybrid Triptych

Chapter 7 ~ Insights & Future Developments

Insights

Project A and B successfully tested the conceptual effectiveness of the Collaborative Method and showed that it's flexible enough to cover projects of different typologies, locations, and scale. However, they did not include the establishment of a client relationship which is pivotal to testing the method's overall effectiveness. Project C expands upon the learnings of the first two by including an interactive client relationship and incorporating their feedback whilst evaluating the method.

Overall, the method was a helpful tool for small scale projects where the client wants to be intimately involved with the design process. Especially when they will be personally using the space and desire a heightened understanding of scale and sensory elements of their design. These understandings of spatial aspects and sensory qualities provide the designer a springboard to create a richer project. One that responds favorably with its natural surroundings. The method also provided additional relationship building exercises that enhanced the

client's level of trust of the designer. Two examples were (1) during Step 6 and (2) during an ancillary "view finding" exercise.

The first example, where we conducted Step 6: Patterns & Objects On-site Discovery, validated the value of using the Modified Pattern Language and coupling it with a sensory experience with full scale objects on-site. During the process we began to speak the same language. I.e. The client began to interpret the exercise by using the Modified Pattern Language on their own. Much like any language you begin to discover other patterns within it after you've understood the fundamentals. It was 88 Degrees the day we erected this pattern (Fig. 80) relationship on site. And the client thus dubbed it The Shady Retreat. Which, as it was 88 degrees, we kept finding ourselves gravitating towards it to hide from the sun. This revelation was interesting because using the language to create new patterns wasn't prompted by the designer. The method simply established the language and the client interpreted quickly to where they could use it to communicate ideas back to the designer. Establishing a common language.

The second example, where we conducted the exercise of View Finding, helped focus the client's perspective on the unique views their site enjoyed. This

Fig. 80 The creation of the Shady Retreat Pattern

Fig. 81 Conducting the View Finding Exercise; Tacoma Narrows Bridge tower

Fig. 82 View Finding: Client finding the point of Days Island (top), the view of Days Island (bottom)

exercise accomplished two things. (1) It created small apertures by using the FFS to hone in on specific points of interest that the client found interesting. These apertures were moved about the site to explore and capture these views. (2) It asked the client to think deeper on why they gravitated towards these specific points of interest. In a sense, finding the meaning of their Zen View Pattern. These views, seen in figures 82 & 83, could provide inspiration on the direction of the design. Such as using these views to create differing forms or orientations. Incidentally, this was the simplest of exercises with the FFS as it didn't require leveling the frame and was light enough for one person to carry about the site.

Client feedback was favorable for Project C. They had a better understanding of spatial aspects and scale. Began to think about the sensory qualities of the project, and had fun doing it. The following quotes provide a summary of the client's feedback of the process:

1. "I have a much better understanding of the spatial aspects and scale of certain design elements. I have a better sense of how many feet these spaces are and the amount of space between them relative to the site."
2. "The built components were an erector set of fun!"
3. "Spending more time on the site helped me appreciate

the lighting, temperatures, and winds and how built elements interacted with them."

4. "Having a physical [method to start with] was great. Now we can play."

Future Developments

While the method proved successful in elevating client engagement with their project further developments were identified to improve the process. These improvements mostly involved further developing the full scale component of the method. While the FFS proved an effective proof of concept, it was found limiting in two ways. Firstly, leveling the FFS was challenging due to the free standing nature of each frame. This added significant time and effort to this step of the method and reduced client's enthusiasm for its use. Figures 85 & 86 illustrates this issue.

The platform was also heavy and impractical to move about the site in an effective manner. Lighter materials can be used in the construction of the platform, however leveling multiple components would still prove a challenge. Fig. 87 illustrates an integrated FFS and platform design in which only the platform would require leveling. The platform includes mortises that surround its

Fig. 83 View Finding: view of where the best summer sunsets occur

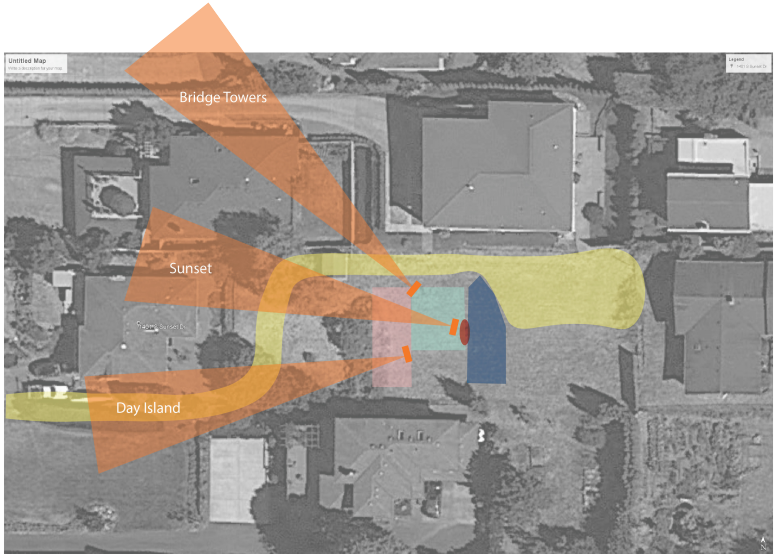

Fig. 84 View Finding Diagram

Fig. 85 FFS requires each base to be individually leveled

Fig. 86 Leveling challenges w/platform and FFS

perimeter that would accept the FFS.

The second issue with the FFS was its use of one material. Wood. Weight was a factor in its use on site and using one material for full scale objects was found limiting during the discovery process. This was due to the material's inherent design constraints of orthogonal structure and the specificity of its implementation (see fig. 88). While the ambiguous open frames proved flexible enough to allow for client imagination, they were unable to see past specific design components like the shading and privacy walls. As these components are only meant to be proxies for potential designs, using specific design aesthetics made the client feel like they were "final" designs. These components also took considerably more time to develop and construct. This goes against the ethos of the method of "Flexible and Fast".

Exploring and testing other materials that allow for other forms, such as curves or are more abstract could prove beneficial in design discovery. Materials such as aluminum rod and sailcloth could produce a lightweight object that allows for parabolic forms to be explored. Or, objects that a client already identifies with, such as box kites could be used as abstracts for view finding apertures (see fig. 89). Using objects that require little to

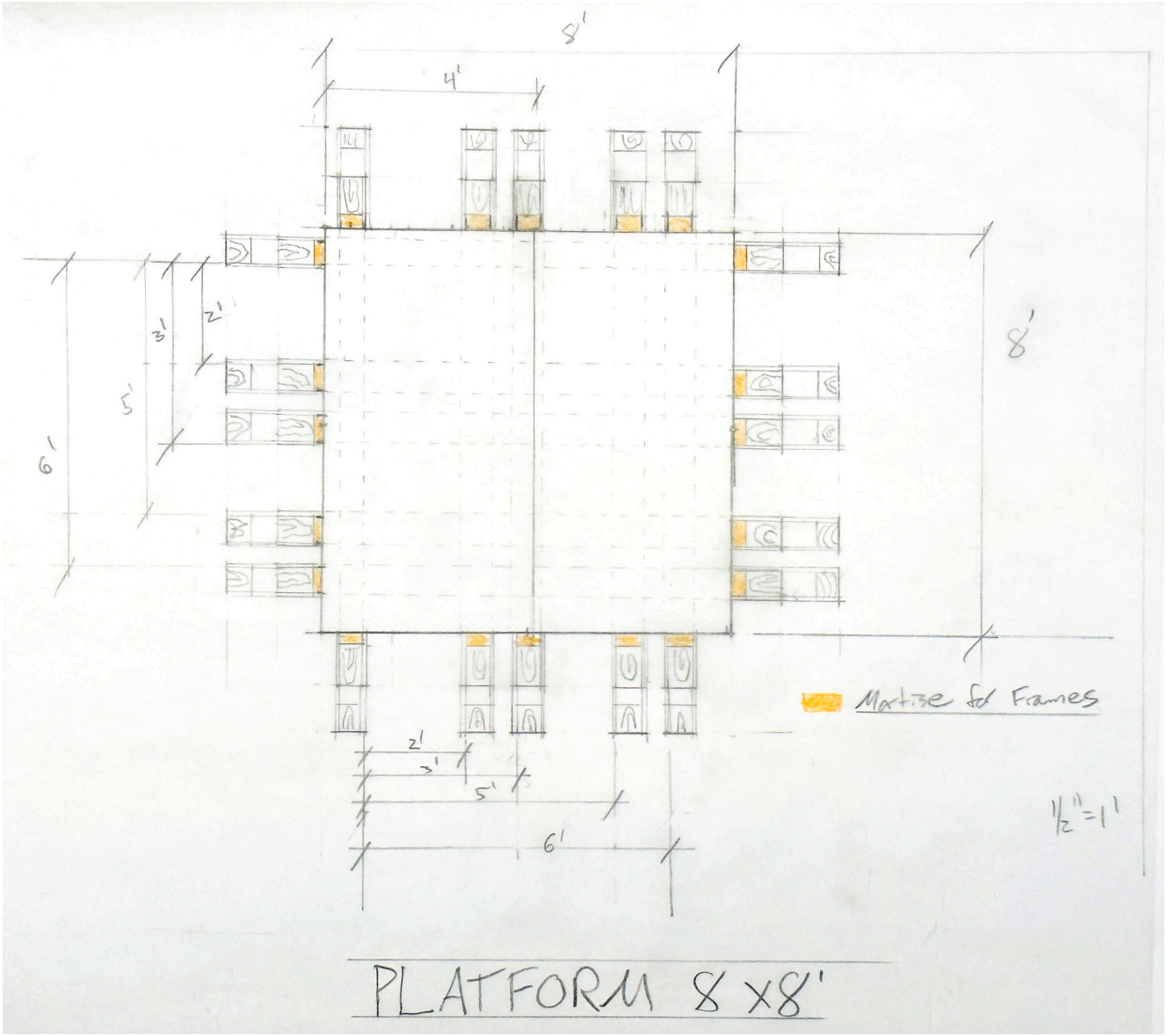

Fig. 87 Drawing of single platform with FFS mortises around perimeter

Fig. 88 Specific design components may be too inflexible at this stage of the design process

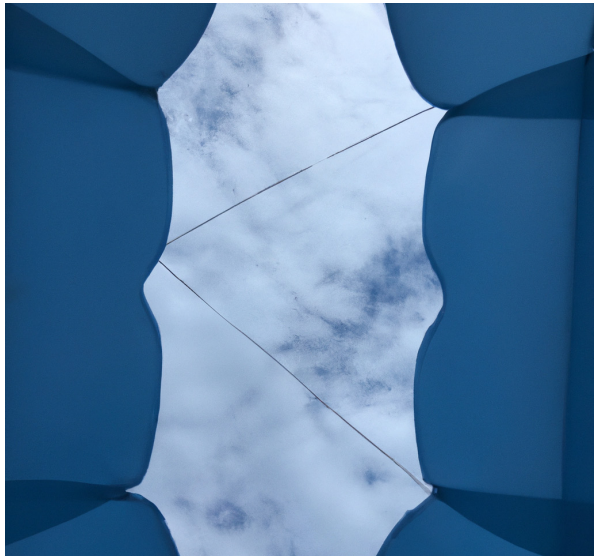

Fig. 89 Abstract of a “box kite skyscape”

no development time, such as the current FFS, also reduces the investment costs of the method. These opportunities could potentially solve the weight and specificity issues that the current FFS system suffers from.

Another note on the issues of specificity at this stage of design should be highlighted. The hybrid illustrations, while effective in creating spatial relationships that the client can understand and relate to their sensory experience, also include the risk of locking the client into specific design choices too early. Using specific design elements such as flat roofs or clerestory windows can have the same effect on a client as using specific built object designs such as the shading wall. The client struggles to see past the specific design aesthetic. Future iterations of the Collaborative Method should explore a transition step, between Step 6 and Step 7 (hybrid illustrations), that documents and summarizes the process so far in an abstract and diagrammatic way. Providing more abstract spatial forms before moving into specific design styles that are represented in the hybrid illustrations.

Conclusions

Architectural practice emerges through complex interactions among interested parties that can last the

course of months or even years. These interactions can sometimes be overwhelming for clients that have no prior experience.

By establishing a common language early in a way that is physically experienced and understood, the Collaborative Method has been shown to effectively elevate a client's understanding of the complex interactions of designing architecture. The client understands their project in a sensory way through relationship building exercises on their project site and was empirically shown to be easily understood. The method combines an effective use of physical scale, sensory experiences and digital efficiencies. It's flexible to use for most small & medium sized projects and does not require significant time or investment to implement into a design process.

The architectural design process can be considered an exercise in exploring the relationships between objects, context, forces, and the senses. It is also an exploration in the relationship between designer and client. Having a design method like this one provides the designer an opportunity to build a strong level of trust not only with their clients, but with the environments where they create their architecture.

Fig. 90 An enjoyable experience of discovery

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Appendix A ~ List of Professionals Interviewed(Architects, Designers, Engineers)

Suzanne Zahr
Scott Crawford
Saul Becker
Kim Clements
Hiroto Kobayashi
Prentis Hale
Louis Mackall
Britton Rogers
Eric Cobb
Tim Eliassen
Steve Badanes
Kimo Griggs

Appendix B ~ Practitioner Interviews

In order as shown in Appendix A

Interview with: Suzanne Zahr, SZ Build

How would you define or describe your practice/business?
What do you do? What services are you providing, and why?

I would describe it as a multi-disciplinary design/build firm where we have an ability to see things from different points of view. We have experience in architecture, interiors, and construction management so we're able to provide a wide range of services to our clients. We provide a comprehensive experience. I tend to think that in our industry people speak different languages (architects, engineers, builders). Cohesiveness isn't always there in other practices and it's easy to silo yourself in the design/build process. We believe in an integrated approach with all stakeholders involved as early on in the process as possible.

How did your practice start?
Has it evolved since the beginning? If so, why did it evolve and in response to what?

This is my second round of running a business. I first went out on my own at 30 after working for reputable firms like NBBJ and Olson Kundig. I held on to my practice for about 8 years as primarily a boutique firm for high end clients, but then the market fell out in 2008 and I had to make a pragmatic decision for me and my family's future. I then closed my doors in 2010 and went corporate as a design director at Starbucks and account manager designing office space for Amazon internationally.

During that corporate time I kept my eye on the market. I enjoy business ownership and I saw an opportunity in 2016 and decided to take it. It started by leasing a storefront on Mercer Island. A healthy live/work balance was really important to me as a single mom so

I thought I would have more flexibility to raise my child by having my practice close to home. My first project was designing this new storefront office space. I fronted my office with a gallery space for artists to come and exhibit their art. The gallery space came from the idea that I didn't want to focus on one discipline. And it's been really fun to have a foot in the fine arts world. I have a structural engineering background and real estate certificate from UW. The practice started with a joyful start. It was a move away from the security and predictability of the corporate world, but I had faith. I casted a wide net and followed my heart.

What types of clients do you work with? Do your projects have a typical budget range?
Are you selective in who you work with/what type of work do you accept?

Post covid it has primarily been residential clients, SFR. We have some Multi-family as well but on a smaller level. More recently, we've been contacted by retail, corporate and food service clientele.

What methods of communication do you use with clients during the design process?

The first contact with our clients is either zoom to see if we're the right fit, or at their homes. The initial engagement is a lot of active listening. I find that bringing one of my teammates with me can also be helpful in setting a tone of approachability of collaboration. After we're signed on we then send out an initial programming questionnaire to get to know them. We take this and create a concept page to start to understand who they are.

The process of engaging our clients from there is about being playful [in the schematic phase]. I try to create a sense of curiosity, exploration, and open mindedness. The way we play is space planning. We design in 3D (revit, sketchup, Enscape). Typically presented on printed 11x17. We'll do 3d fly throughs. I also make physical models. It's part of my design process, but it depends on the client. For example, some clients struggle with 3D visualizations so we mock up certain designs at scale.

Does making physical things fit into your practice? If so, how?

I am a design build firm so yes, very much so. In terms of representing design, I still make physical models. I feel they are important. We do a lot of digital rendering of course, too. As a design/build process, there are certain decisions I won't make until we are further into the build process. I won't fine tune the design until we're in space. For example, paint colors, wall coverings, and other details may get finalized in the actual built environments. Another example is I didn't design a loft ladder in a DADU project until the space was built because I wanted to see the relationship to the kitchen and the ladder's proportions. I occasionally hold off such human level elements, things that you can touch, until the building is up. Even if it's only waiting until framing is done. My business model allows me to be a little flexible this way.

There's nothing that beats walking around in the space to understand the architecture, though we try to imitate it as best we can before we're in space.

(If applicable) Do you find clients respond favorably to physical items such as full scale mock ups or prototypes? Do they find these items helpful and engaging in their design?

Yes. For clients that won't really see the design until it's built, or struggle to visualize drawings and renders in a 3D way. Some people won't understand the language that we architects are so used to. So we get pretty creative to try and get that changed as best we can. We've had projects where we've mocked up cardboard boxes of the ideas at scale in client's spaces.
There's nothing like walking through a finished work of art. I wonder if it is different when you were a part of the whole process? Meaning does the client feel the same way about a project if they just walk into a finished project without knowing what went into designing and building it.

Can your business provide a different type of project because of your model?

Yes. There's a tightrope between design functions and build functions. For designers, your obligations are to develop the construction

documents as an expression of your creativity. So you need to have those pretty well ironed out and decisions need to be made well in advance.

I'm a design/build firm because it provides me with more flexibility. The process makes better sense to me. You're trying to advocate for the client and make their dreams come true, as the contractor thinks about the economy. This sometimes can create tensions between parties. Design/build is all the same team and we lead with creativity and design.

When I was at Olson Kundig we detailed everything. We had multi-volume sets of drawings going out for SFR projects. So we would spend a lot of time upfront designing everything, but then the contractors wouldn't always follow some of those details, because they know better. A design/build firm I feel like I don't need to detail everything in the beginning and can figure certain things out later in the build process, if need be. It helps us move faster into build, but the paper trail and the liability and the forethought is as important as it is in a design firm.

I don't ever want to be under the thumb of a contractor. We work so hard as architects to earn the trust of the client and a contractor can come in and begin questioning everything on the basis of costs/time and this can have the undesired effect of eroding the architect's authority and client trust. I don't think that's how we're meant to be there as architects. I always want to maintain authority in our projects. However, you have to be aware that who owns the design is typically the one who is paying for it.

Does your business model impact project cost?
Is this something you measure/track when looking at your performance?

I've been thinking about that pretty specifically on our project profitability. The one main advantage is I've diversified my revenue streams. I can be busy in my construction realm when design slows down. And then be design heavy when construction is slow. Sometimes they both ramp up/down at the same time. I like the diversification aspect. The other thing is I can forecast my construction crews fairly exactly. Because their pipeline are my designs. It is nice to have the connection between the design and construction to forecast work. Those are the benefits, which are reflected as cost-efficiencies in our project costs. The risks are also

there. Design contracts are fairly straightforward. Build contracts have more risk. The build side is a little more complex in terms of the cash flow, PO process, lien waivers. They are more of a burden on the accounting side. Key to our favorable outcomes is selecting trade partners that meet our design challenges efficiently and beautifully. In the end, my business model is rooted in the relational work we do as collaborators both in design & construction.

Have you had instances where a client misunderstood what you had communicated and it ended up as a large change order in construction?

Yes. That has happened. We tore out countertops recently that a client wasn't happy with and reinstalled what they wanted. The backline looked great on paper, but the proportions were just off in real time. We didn't see this until it was built. I don't ever want our clients to live with something that they aren't completely satisfied with. Every detail counts and we'll redo it if we have to. Sometimes it costs them. Sometimes it costs me and the business.

Where do you see your practice going? Do you see it continuing to evolve? How?

My ultimate goal is to become a developer. I want to do it in a soulful way. I'm trying to figure out how to translate that into 'brick and mortar'. I've worked with developers that are rigorously proforma-driven. I would love to pull together development projects that offer highest and best use of that land, with positive impacts to the local community, go through the design/build efforts, then earn passive income through rentals or resell. My 10 year goal would be to not necessarily have clients, but I would be very selective. If there is an opportunity to speculatively build projects I would like to have that lead the practice.

Ending comments:
Are there any comments you'd like to make in addition to the questionnaire above?

A design studio I had in graduate school at Columbia sounds similar to your thesis process. We used a Bosch painting as the starting point and we dropped a square down anywhere on the painting and began to pull inspiration from inside the square. Part of the

design process involved a word knot, then paper cutting pieces turned into a model in which we'd shine light through it, photographed it. It was a series of non architectural related abstract design challenges in the beginning. We would then take that same process with a spatial outcome and do that to the project site. It sets up rules to see patterns and distill them to create spatial and programmatic elements. My design from that studio was one of my favorite outcomes of my architectural education. What was most exciting about it was the conceptual relationships and the surprise of the outcomes. Patterns of behavior.

Instructor name of studio: Evan Douglis

Interview with: Scott Crawford, LMN (Tech Studio)

How would you define or describe your practice/business?
What do you do? What services are you providing, and why?

It is a culture of thinking. And using that culture to inform how we practice architecture.

How did your practice start?
Has it evolved since the beginning? If so, why did it evolve and in response to what?

The Tech Studio within LMN began in 2009 and was started to explore new ideas and directions for the firm to work. It initially focused on digital modeling and fabrication with 3D printing and CNC milling machines. In the beginning, we really didn't know what we were doing, and neither did anyone else, but we would come to meetings and would ask questions on how things were done and why. We would then see if we could do it differently.

What methods of communication do you use with clients in their projects during the design process?

We start with abstraction. We use diagrams of ideas, then move to digital models, then move into the physical space. The theoretical works at first, but only gets you so far. Creating the idea in a physical way adds another dimension of understanding.

Does making fit into your practice? If so, how?

Yes. It is an essential aspect in testing out our ideas. Ultimately, making is how we test out a new approach that hasn't been done before.

Do you find clients respond favorably to physical items such as full scale mock ups or prototypes? Do they find these items helpful and engaging in their design?

It is client dependent, but yes.

Can your business provide a different type of project because of your model?

Yes. A lot of what we design we would struggle to find anyone to partner with that would be interested in making it. Either because it would be too expensive or they don't want to spend the time learning how. If we didn't have the capability to make it in-house it probably would not happen. Making design components in-house also provides us with the knowledge and experience of the other trades in the industry. It allows us to speak their language.

Does your business model impact project cost?
Is this something you measure/track when looking at your performance?

We don't bill our work directly to a project. We don't treat this process as an add-on service for our clients. There is no direct ROI, but the benefits are there for LMN. We are changing the way we work and how the industry works.

Have you had instances where a client misunderstood what you had communicated and it ended up as a large change order in construction?

Right now, not really. The components that we make are small aspects of our architecture projects so they don't have a large impact. On the contrary, the value of our process is we actually have better communications with our clients.

Where do you see your practice going? Do you see it continuing to evolve? How?
It's going to expand in our architectural practice. The plan is to move from making individual items for projects to full projects.

Interview with: Saul Becker, Mutuus Made

How would you define or describe your practice/business?
What do you do? What services are you providing, and why?

We try not to define it and allow it to develop through the design process. We have great partners and a great team to make that happen.

How did your practice start?
Has it evolved since the beginning? If so, why did it evolve and in response to what?

Kristen was a sole proprietor architect in New York and I was an artist. Our professional paths didn't cross too often at that stage. We moved to Seattle and Kristen wanted to go out on her own after working for Olson Kundig. She found a partner, Jim, and began the planning process to start a firm. Both Kristen and Jim asked me to be part of the business and thus Mutuus and Mutuus Made were born in 2016.

What types of clients do you work with? Do your projects have a typical budget range?
Are you selective in who you work with/what type of work do you accept?

It's a bit of a mixed bag. We aren't selective at this stage of the business. We do architectural design, interiors, and have also worked on 'turnkey' projects where we will fully choreograph the whole house (architecture, interiors, details, art).

What methods of communication do you use with clients in their projects during the design process?

For Mutuus Made, physical materials are key. I've sent boxes of materials to clients that I've choreographed for their project for them to experience. We also do lots of hand drawings early on in the process. Both physical objects and hand drawings have spirit. We tend

to stay away from CAD until later as it feels too fixed. Clients feel the clean lines means it's finished. We then move towards digital renders in Enscape, but it is client dependent.

Does making fit into your practice? If so, how?

It is what Mutuus Made(MM) does. It is the business. We focus on the tiniest of details. All MM products go towards Mutuus studio projects. We do not sell MM outside of our architectural projects.

Do you find clients respond favorably to physical items such as full scale mock ups or prototypes? Do they find these items helpful and engaging in their design?

Absolutely.

Can your business provide a different type of project because of your model?

Yes. Having a fabrication shop in-house allows us to make custom pieces for our clients.

Where do you see your practice going? Do you see it continuing to evolve? How?

I would like to get to a place where I am able to focus primarily on prototypes, on design. I'd also like to grow to a point that we're able to sustain a full production workshop for cabinetry, furniture, lighting, hardware.

Interview with: Kim Clements, JAS Design/Build

How would you define or describe your practice/business?
What do you do? What services are you providing, and why?

I would call it Journalistic. We do residential homes. We are 'humanist' architects. The first thing we do is measure the client's current home with them. We have a design kickoff with as-builts which we go through with the clients. We ask questions that can be considered touchy. Intimate. These questions tell you as a designer how they will experience the space. How they live. We are as much an educator as a server for our clients. I start the project with the ideas, then project architects take over, and then our builders finish the job.

The majority of our work, 89%, comes from word of mouth from previous clients. We do our utmost to make a beautiful, quality product. We're still a design/build firm because we care about craft, our workers, and people's stories. You can't do it without listening to them or building deep relationships with your clients. Accepting them and that they have things that matter to them.

How did your practice start?
Has it evolved since the beginning? If so, why did it evolve and in response to what?

Joe and I met at the School of Design at NC State in Raleigh. The first Jersey Devil book came out and Joe and I thought, hey, this could be the way. Joe's background was working building sites, mine was design. We tried the design/build model first in Connecticut. In the beginning we were just figuring out how to do this and how to get paid for it. We moved to Seattle in 1990 and I was going to grad school. A friend of ours from Raleigh, Ted van Dyke, was also in the graduate program at UW, and responded to a 4/5 unit remodel project in Seattle. Ted was designing the remodel, but asked us if we wanted to build it. That was our first project in Seattle and got us off the ground.

For our model, we design what we build and we build what we design. However, there are instances where we'll work with other

architects. Gordon Walker, Ellsworth Story, Paul Hayden Kirk.

There is a legacy of design in the Pacific Northwest. I now use the term ‘craftsman’ houses to define homes that are designed and built by builders with an eye. Many of these houses are basically cupcakes. They’re all the same. We really studied the typology of these houses to find opportunities to work with.

What types of clients do you work with? Do your projects have a typical budget range?
Are you selective in who you work with/what type of work do you accept?

People who don’t care about where they live are not our clients. Those that do care about design, we’ve worked with clients 3-4 times and they’re never the same client on each project. The second time around they’re even more hungry, more interested, more capable, more trusting. Maybe the project is better, or takes less time, or there is less fighting. We make committed relationships with our clients.

Interestingly enough, we’ve had people choose not to work with us mostly because of the budget or schedule and they went with someone else. But we’ve had these people refer us to other clients.

During a project, where will miscommunication happen most often?

I can’t tell you how many times I’ve done sketches, models, etc. over and over again to make it clear to clients, to show them exactly what they are getting, and some clients really struggle with grasping certain concepts.

Other comments:

Are there any comments you'd like to make in addition to the questionnaire above?

Some comments and questions to consider regarding A Pattern Language and building:

At JAS, we use A Pattern Language as a lexicon with an embedded meaning that doesn't take a Capital A architecture direction. It can be a way to explain how good an idea is. It provides evidence. It provides a common language. But it's a shockingly dense encyclopedia and I don't bring it out in meetings with the client. Because it's daunting to look at. What it teaches you most is it makes you think across time and function which are important layers of residential design.

If you look at a house by Gordon Walker, you can take pattern language and you can go, "oh I see what Gordon did there, that is a seat at a window." Gordon thinks like a builder. He makes things with his hands.

A couple of examples of implemented Patterns:

We do a lot of cold cupboards; placed on the north side of the house. It's an old tech that we are reimagining to fulfill modern living expectations. The evolution of the larder and kitchen. A living kitchen (less kitchen, more gathering).

A couple of comments on using/creating Patterns:

I would love to see someone create a 254th pattern. "The Zoom Room". "A place to leave technology behind".

When considering new patterns just look at how people live. How do people experience the world in their lives? Things you do to make your life easier. Look at ways more humanistically on how people live in their homes. Is this a pattern or a habit and are they different? Is this a fad or enduring? The natural ways in which people want to live.

A couple of comments on pairing patterns with built objects:

The quintessential patterns come together in a physical way. The relationship between the patterns. Create quintessential detail mock ups, Pattern mock ups, and discern which of these patterns bears building in order to be fully understood.

What are the elemental materials of the northwest? These are my 10 patterns and these are my 5 materials that express these 10 patterns that we are utilizing to fuze into the project. To bring meaning to the project. I don't think you have to stand inside of it.

Sauna, outdoor shower, outdoor kitchen - make this pavilion something pivotal to the house that you're designing. Create layers of experience and how those experiences relate. And making it a tangible thing.

Interview with: Hiroto Kobayashi, KMDW & Veneer House

How would you define or describe your practice/business?
What do you do? What services are you providing, and why?

This client's preference in design is important. Their living culture. The client's character is a very big one. Context of the land is very important. We try to understand the client, then the land, then the program. Then we figure out how to shape the project.

Most of our projects are mixed-use and commercial. We've only designed a few SFR projects.

How did your practice start?
Has it evolved since the beginning? If so, why did it evolve and in response to what?

(We focused on Veneer house). It started in 2011 after the Tohoku tsunami and was attached to Keio University where I teach and have a laboratory. For the first project we tried to find carpenters but they were all busy because the country was rebuilding everywhere after the tsunami. We couldn't get any professional builders. We decided to develop a building method based on the Eames "House of Cards". Amateurs can build, or students can build. The system doesn't require an experienced group of carpenters to build. Anyone can be taught how to build one. Veneer House was designed as a simple, economical structural frame system for disaster relief buildings. We decided to use plywood as it fits the bill for both strength and economy and can be found mostly everywhere in the world.

Is there overlap between both companies?

Employees at KMDW are more interested in big projects and design. Not necessarily the building of projects like those of Veneer House.

Why is it important to practice with both companies?

Making the space for people who will be responsible for the space. My dream is clients should join in the process of design to construction. A collaboration with client, architect, contractor throughout the entire process. If clients are really proud of that building and have an attachment to the building, that building becomes more important. People can resonate with it. Our first Veneer house was demolished a couple of years after we erected it. We believe this was partly due to us (students) constructing it in a silo from the community that ultimately used it. The community wasn't a part of this project. Contrasting that, a year later (2013) we had another project where we taught the local fisherman how to construct the building through a diagrammatic construction manual. That building still stands and has even been modified by the community to better suit their needs. This social aspect of building has created a sense of meaning for the community to this structure. It is part of them. The first project couldn't say that. It didn't mean anything to them.

Does making fit into your practice? If so, how?

Yes. The veneer house system was designed by us and can also be built by us (with help).

Do you find clients respond favorably to physical items such as full scale mock ups or prototypes? Do they find these items helpful and engaging in their design?

As stated above, students had a massive level of satisfaction after completing a project, but the community wasn't involved. The next project we had the opportunity to include the community. The fisherman assembled and built the project. They even added new components to the building tailored to their needs. They felt like they had ownership.

They then offered to build a house for the community. It didn't happen for a couple reasons, but they are willing to do it and they have the knowledge now to do it. The problem is having someone in charge of the project to manage it through the process. We can work with carpenters, but this process is being worked on.

Where do you see your practice going? Do you see it continuing to evolve? How?

We made Veneer House Inc. five years ago to provide it more freedom as a private company from the University. I would like to turn it into an organization that expands the geographical reach of the projects and is able to help manage these projects at scale. We are thinking about doing something in Ukraine for war relief and in Turkey for the recent earthquake. We'd also like to develop a SIPs panel system in the near future, but still have it based on the core principles of Veneer House.

Interview with: Prentis Hale, SHED

How would you define or describe your practice/business?
What do you do? What services are you providing, and why?

We are an architectural design practice that primarily does single family residences. We are a flat organization that lacks hierarchy and we try to keep anything that isn't design focused as efficient as possible. We tend to keep projects to a size of 3,000SF and we don't have a style like other firms. We pride ourselves on doing good work. We also do some work with DIY clients who build themselves.

We work almost always in the digital space. We've found that 3D digital models provide real power to the client to make good decisions. They are also really easy to share with clients, and incredibly efficient to make changes to. This keeps the design moving in the right direction in a timely manner. While Thomas and I feel that sketch work is better for older designers, using the digital tools we employ are great equalizers for younger designers. On the business end, we've just never done the big homes in town. The clients we work with aren't willing to pay for additional services such as physical models so the digital design tools work well for us.

How did your practice start?
Has it evolved since the beginning? If so, why did it evolve and in response to what?

We started as a design/build firm, but moved into a dedicated design practice around 2010. 2008/09 was the last time we built something ourselves. Got through that recession with a mix of remodels.

We landed on a digital presentation model, which preceded covid, since 2010 when we made the switch to mostly design work. We don't make any models at all anymore. Making models is expensive. They have to be useful for design purposes for us to consider. We'd rather spend time working on a killer presentation for a client than a scale model. We want to pay people who work for us a good wage in Seattle so having them work on something that isn't necessarily valued by the client is a no go. We aren't large enough to have an internship program to have them do models.

What types of clients do you work with?
Are you selective in who you work with/what type of work do you accept?

Yes. We are selective. This is a hard profession. Lots of risk, time, energy, and love goes into each project and we want to work with clients that are with us and believe in our design methods and processes. Happy clients are one of the best reasons to be in this business.

What methods of communication do you use with clients in their projects during the design process? How do you collaborate?

We do a lot of collaboration with our clients. We are far more open about our process than some other firms. We share models, we share all the work we've done, mostly via the web based app Miro. We use Miro boards for each project and client. We have them start a pinterest board but then we refine those early ideas within the client's board. We show them we listen, but cut the chatter really quick. Clients can drop stuff into the active Miro board that we use. We'll tell them that we'll throw drawings up on miro tomorrow, and ask them to give us feedback soon. It's incredibly efficient in drawing out client feedback. We've had some clients redesign stuff in photoshop and reupload to the board as feedback for us. We'll include base plans and redline them. Plans aren't perfect early on, but they don't have to be. We get to the core of an idea as early as possible without making things look perfect. Then we iterate, iterate, iterate until the ideas have been refined.

Miro is a controlled, curated place to move the project forward. Drawings, renders, precedent studies. This is our primary communication tool for decision making with the client. That said, we use other methods of communication outside of Miro. For example, We even use VR headset for virtual walkthroughs on some projects. Most of our clients already have these headsets so it's an easy service for us to provide. We are always looking for the most efficient way to do things. We've also adopted smartsheet and G-suite as collaborative tools. We give clients access to these tools so we can share.

What matters to 70% of clients is not what you think matters as an architect. They want bathrooms to be dialed in or a space for an activity they like. This is often true for remodels. What has been successful for us is not talking about "archispeak" when we pitch.

Instead, build a straightforward description on what it is. Clients want options. Present the answer to the problem. Here's a solution, then here's two options for you to take. Most clients want this form of service.
We do remodels really well. I do not feel the need anymore to show up to those meetings and provide options. I just come in being direct and really clear with an awesome scheme. I think these are productive conversations. Too many options cedes design control to the client and it can stop the momentum in decision making.

Overall, we try to figure out what might be engaging as clients. Who are they as people? What are they interested in? For example, we created a highly personal presentation for a pair of brothers who were into cards. So we tailored a presentation with a deck of cards template, made some small models out of cards. Hybrid sketches, diagrams, showed them we are thinking about what they're thinking about. The digital can be a physical manifestation if you do it right. This is more of a marketing tool than a design tool, but it's engaging and gets the client excited about working with us.

Does making fit into your practice? If so, how?

Not in regards to physical models. The question is what type of client engagement are you looking to work with?

Interview with: Louis Mackall, Architect & Leetes Island Woodworks

How would you define or describe your practice/business?
What do you do? What services are you providing, and why?

For me my architecture practice and woodshop are a way to get to the particular details. To be able to make exactly what you want. Some years ago we purchased a CNC machine which is able to make certain custom designs affordable and can make some pretty funny stuff. I thought making stuff was just what you do as an architect so it never really occurred to me that making physical things for your architectural projects wasn't typical. It's fun for me. I've not placed a large emphasis on marketing what my practice does as I've always been more interested in doing it and had enough work so it's difficult for me to actually define what it is that I do [at least as a sales pitch].

Services Provided: For years I did apartment renovations in NYC. My approach was to take an anthropomorphic view of things. For example, a door is a body as we are a body. Of the objects we have around us the door is the closest thing to us we have. It's the authority on whether or not you can come in and is about the same size as us. In a way you are coming to your own self. Unfortunately, you rarely see an individual front door. My focus is on making something that's affordable and beautiful.

How did your practice start?
Has it evolved since the beginning? If so, why did it evolve and in response to what?

The architecture practice was first. And the woodworking business allowed the projects to last a little longer. There was no plan in the beginning with the woodshop. I like to make stuff. In the first jobs I had I would make whatever I could on a borrowed table saw. I started out with my older brother as my helper. I had the precedents of my brother and father of making things while I was growing up so it felt natural. Though I didn't decide to become an architect until later in my life as I didn't get out of school until I was 26. When I was at Yale a guy in an older class decided to become a developer and bought some land up in vermont. I bought some of that land and built a house by the end of graduation and continued doing stuff like that when I got out of school. Some of the best work I

ever did was in those first years of practice. One project was a house on nantucket. I did all the interior doors, stairs, kitchen, railings, latch in the kitchen. Later, this was 45 years ago, I hired Ken to help me in the shop, bought a bandsaw, and a drill press to expand my offerings. The shop continued to grow even though neither Ken or I are particularly good at business or salesmen, we just do what we do and drum up business mostly through word of mouth.

What types of clients do you work with?
Are you selective in who you work with/what type of work do you accept?

I've never had the privilege of being selective with clients. I would do 15 concurrent jobs myself on average. After a while I found I didn't need or want employees [for the architectural practice]. I've had enough architectural work in general as a sole proprietor and part of that is because the shop takes some of my time. Finding work wasn't much of an issue. My technique, used primarily on renovations, is to charge per hour. However, I don't require money in advance. I will 'start' the job by meeting the potential clients in the morning, work on the basics with them, clean up the drawing on the train home from NYC, and create an accurate, to scale, drawing set by end of day. I will then show the clients the work and they would then decide if they want to move forward with me or not. Client is at no risk, but gets a concept by EOD. The hours that I worked that day, if they want to move forward, would then be applied to the project. If they decided they didn't want to move forward I wouldn't charge them.

What is your process for engaging clients in projects?

Arrive early with and talk with the client then send them drawings as quickly as I can. Things then get flushed out and I try to make the changes as quickly as I can. Things move along and become more developed, primarily through drawings. I'm interested in doing what the clients need as quickly as possible so we are in a constant dialogue. I'm not interested in selling to the client besides showing them that I get results quickly. Then they get hooked.

Does making fit into your practice? If so, how?

Yes. Making things is the holy grail. You're happy when you're making stuff, period. Whatever it is. Words, drawings, doors. Whatever. I've had this relationship with my business partner Ken, who knows how to run the CNC for complex geometry [in a way I don't know how]. The key for me is how do you overcome the standardization of made things. We as humans should be expressing ourselves and we should not be pushed out by machines [that make cheap and standard items for everything].

Do you find clients respond favorably to physical items such as full scale mock ups or prototypes? Do they find these items helpful and engaging in their design?

Not as much as I should have used them. I've always been lazy in making models. But for the client they respond favorably to 3D items and most clients have zero 3D capability when looking at a drawing. To show someone the thing you designed for them in 3D they get on the edge of their seat. It's a huge help and a great sales tool.

Can your business provide a different type of project because of your model?

Oh yeah. The 'game' should be about how to leverage your unique abilities and experience. Ours was having the woodshop. Had great relationships through word of mouth and the woodshop helped tremendously for architecture projects. Though, the shop wasn't always available for architecture projects as it had its own client base.

Does your business model impact project cost?
Is this something you measure/track when looking at your performance?

I don't have any idea. With what I do, primarily I pay attention to things being well done in the first place and following up so that it gets built properly. Outside of that I don't know.

Where do you see your practice going? Do you see it continuing to evolve? How?

The woodshop has transformed into a furniture business where I want to design more pieces for. What we make now has a future as I believe we make something that is beautiful and affordable. Ideally I'd like to continue designing stuff/furniture as I find it fun and enjoyable. I'm very fortunate to be in this position.

Are there things that you do now that you wish you didn't have to in order to get your work done? Meaning, you have to rather than want to.

If I had my druthers all I'd want to do is design prototypes. "How can you design something with no material and no money and make it beautiful?" There are ways to do it.

Interview with: Britton Rogers, Yestermorrow Design/Build School

How would you define or describe Yestermorrow?
What do you do? What services are you providing, and why?

Our priority is hands-on education and helping people connect to design and build. While we do produce buildings for clients we mostly focus on the education side of things.

How did it start?
Has it evolved since the beginning? If so, why did it evolve and in response to what?

We were founded to create a place that focused on connecting builders, architects, homeowners through a common process so everyone had a better understanding of how the process of building works in totality. We are still doing that. Lots of do-it-yourselfers come to us as students looking to learn how to build something like a sauna or shed and then do it themselves instead of hiring someone. We teach students to speak the language of the industry. Have them understand how everything goes together.

What types of students/clients do you work with?
Are you selective in who you work with/what type of work do you accept?

The students we have are looking for tactile, actual connections to building structure. I personally was a licensed architect who didn't know how to build anything when I came to the school for the first time because I wanted to change that. Others, such as DIYers, want to understand the built environment to be able to venture into hobbies, and the pros want to learn more and become more engaged in building science.

For clients - we have a lot of community groups, private homeowners that understand what its like to work with a school. We do some affordable housing for low/middle income neighbors. Everything we produce is staff/student labor.

What methods of communication do you use with students in their projects during the design process?

A lot of drawings, a lot of models. We do some mock ups, but primarily model and drawings. But that's partly due to the nature of the projects they are working on. Which are full scale built works so working on mock-ups isn't necessary most of the time. However, that's also due to the fact that we have a bunch of full scale structures already on campus that we use as examples for students to look at as case studies.

We do have students tape out our tiny home designs. If it's a novel design we will mock up some components or joinery. We'll use clamps so its easy to work with. But we typically dive into the full scale project once we progress through the drawing and scale model phases.

Do you find students respond favorably to physical items such as full scale mock ups or prototypes? Do they find these items helpful and engaging in their design?

Oh absolutely. The weight, the texture. The tactile nature of it is much more powerful than what a drawing or model is able to convey. It resonates with them. And for the clients too.

Where do you see your school going? Do you see it continuing to evolve? How?

We definitely want to work on our project delivery. We're working on different ways that can be integrated because it's really important to see the completion of their projects. And also for client relationships. I can see us doing a lot more prefab, modular systems as well. If we can build them we would use the same client base that we currently have. I don't think we would increase our client base.

Ending comments:

Are there any comments you'd like to make in addition to the questionnaire above?

In regards to your thesis idea, I love the idea of having a mock up that can be utilized and applied into the project from a materials and sustainability standpoint. Meaning, using those materials in the finished project instead of using the materials simply for the mock up. I love the idea of the plan and the section being in relation to each other so you can see the language consistency in 3D to create a design with depth. For a living environment there are opportunities for the object's connection to the ground and the landscape.

I love the value of the hands on approach of design/build. In general there is something that comes through the digital screens we spend so much time on now. It's so much more about the human experience. In this day in age it feels like we're losing sight of that.

Interview with: Eric Cobb of E.Cobb Architects

How would you define or describe your practice/business?
What do you do? What services are you providing, and why?

We are a relatively small 10 person architecture firm. We only have designers on staff and don't have layers of administrative employees. We just focus on design. Everything else we do around design we make it efficient. We focus on design and architecture services for specialty projects that require unusual solutions for unusual circumstances. Super custom, difficult sites, and permitting nightmares are our specialty. We're really good at taking a giant mess, working our way through it to design something incredible with focus on the clients. Clients have a focus on what they want but they don't know exactly what that is. When a client asks for something we dig deeper on what the root of their desire is. For example, a client may request a red front door. What they're really asking is how their entry experience will unfold. There is a presence to the front door. There is a theater to the arrival. We strive to understand what's behind the request. The compositional experience unfolds and the clients feel they are participants in our process.

How did your practice start?
Has it evolved since the beginning? If so, why did it evolve and in response to what?

I Did a 3-year program at Columbia. After that, I worked for a professor of mine. I was thrown into the intensity of architecture in NY and shortly thereafter I burned myself out. My parents wanted to downsize in Seattle and were looking to build a new home. I designed their house, but the design bids came back 2x what their budget was. I quit my job, came back to Seattle, and built the place myself as GC (with the help of subs). The experience truly brought me back to a position where architecture is about space, light, and structure. The project had a super high design ambition, but a very modest cost/budget. That project was my learning ground for the practice I started in 1995. There was very little modern work in 1995 already built in Seattle, which is what I am interested in, but there were lots of opportunities everywhere for building structures and the appetite for modern design was growing.

What types of clients do you work with?
Are you selective in who you work with/what type of work do you accept?

For the most part I will work with anybody that is on board with our mission. We put our work out there and we make sure our clients understand from day one this is what we do. We don't do traditional craftsman style in Seattle. We don't look for specific qualities in clients, but we do lean into extravagant projects. We try to be very clear what our strengths are early on. Maybe over years we've said no to about 2-3. Most of our clients are from word of mouth, website. We have a lot of repeat clients. We'll design their home then they'll open up restaurants, or will move to sun valley, or will build a large apartment building that they'd like us to design for them.

What is your process for engaging clients in projects?

Personal contact has been an important part. Being able to sit down with them and talk through options and opportunities. We would never put an architect's ego on the table. It's the client's project and our role is to guide and provide recommendations. You have to be a listener. They will see you as an ally, an interpreter, a collaborator. Getting your client to that position is very important and trust is incredibly important. We'll have fantastic ideas and terrible ideas and you need to tell me. And that goes for the client as well. Trust is important to be able to have that open dialogue with your clients. You also have to remember that you're working for them. This is their project.

Not all clients are visual so you need words to describe what you're talking about. An insightful way that knits together the vision of the client that they can understand. A narrative that tells their project's story. Their story. It's an ongoing series of conscious steps to loop them in. You have to be humble and have constant contact with your clients (we meet every two weeks).

Originally we did tons of physical models and every architect had a model workspace at their desk. Hundreds of models were in the office at any given time and they were fun to look at. That work stopped entirely once we started working digitally. For some clients that need visual reinforcement we render a lot and we have enormous rendering capacity. We do have a 3D printer but we find it not

that useful. We model and render a lot, but all digitally. I miss the actual models but the digital modeling is so efficient and better for communication because you can pass it along, and it's easy to edit. It has flexibility and a resource that can accommodate change far more than a physical model can be.

Does making fit into your practice? If so, how?

Everything is about making. But in thinking about the making of an artifact, I've had to put that aside because those items have felt more personal to the architect, not necessarily the project or the client. It has become secondary to the priority of making a project as good as it can be. An actual project. We do have a large library of material samples, but we don't have a shop.

Can your business provide a different type of project because of your model?

Night and day difference. The opportunity to be able to allow honest structure to be a primary player to your experience of the space and the actual finishes of the space is night and day to what the industry is offering. We think about outdoor spaces first. The landscape first informs the architecture that we do.

Does your business model impact project cost?
Is this something you measure/track when looking at your performance?

It adds expense. First, you can't just pour the concrete, you have to think about it as a finished product. More care is involved when you build the structural components of the project. Typically the structure wouldn't be exposed so you wouldn't have to worry about how it looks. Not so for us.

Where do you see your practice going? Do you see it continuing to evolve? How?

I'd say the evolution has been organic. We do lots of small work. I like that range. I'd like to be able to do some public work but it's been extremely difficult. Public work is low cost, but it would be unbelievably exciting to do a library or fire station. I would love to see us get into an ability to do mid sized public projects.

I'm going to find how to do work for the red hot chili peppers. They bring a creative use of rhythm that feels really close to our work. There is a creative overlap that I feel would make for some beautiful projects.

Ending comments:
Are there any comments you'd like to make in addition to the questionnaire above?

Richard Meyer's vision was the pure model. The model was more important than the built work. The models would capture the idea perfectly. The architectural expression was the model. The goal was to make the building look like the model. Eric's practice is very very different from that ethos.

Interview with: Tim Eliassen, TriPyramid

How would you define or describe your practice/business?
What do you do? What services are you providing, and why?

We were different because we run a design operation and a manufacturing operation however, we get paid for what we make, not what we design. What we design is hardware for projects such as the apple glass stair. We dont design the store or the idea of the glass stair or engineer the glass stair. We engineer the hardware. Collaborate with architects, engineers, contractors. We engineered hardware for the pyramid at the Louvre. I.M. Pei's project. He would say, "I can do a B+, but if you get the details right I can get an A." We strive to make tactile hardware that you want to touch. That engages you. We started in racing sailboat hardware but felt the Combination of skills working on such details has a home in architecture. We can design the hardware to look the way the architects want and design it to work the way the engineer wants. We view ourselves as collaborators with these professionals. We try to help. In terms of prototyping, we mostly use solidworks. We end up designing the client's hardware, then being able to send the file to the CNC lathe or milling machine. If we're doubtful on how it'll work or look we'll make it out of aluminum for a prototype since it's easy to mill. The amazing bit about this process is we can do a design iteration in a day. We do two flavors of prototyping, structural proto, architectural proto.

Structural/mechanical- examples: facade mockups. Glass mockup: glass canopy above entryway. Local fire dept. wasn't happy with it as they were afraid it would fail and block the primary access and you can't have the door obstructed. We built a full scale mockup of the canopy and tested it by breaking one layer. Then another. Then the final layer. Turns out the century glass plus laminating medium had enough tensile strength short term. Enough for it to hold for the local fire code.

Architectural - Steve Jobs and the Apple stores. Steve was really big into iterations. Colors, hardware, design. He would mock up the entire store! Peter Bohlin and Tim went to Steve with a part to get approved for a new apple store. Steve, the owner of this massive company, was involved in minute details such as hardware on a ceiling 35' above the floor that no one would ever see, but he wanted to see it so he laid on the floor and asked Peter to hold the piece of hardware above him so he could get a good view. He sweat the

details. We also feel that if you don't get the details right why come to work at all? We sweat the details, too.

How did your practice start?
Has it evolved since the beginning? If so, why did it evolve and in response to what?

We started making sailboat hardware. Racing sailboats. The smallest of fittings at the top of the mast. Striving to make them lighter and stronger so the boats could go faster. We got involved with the pyramid through an English architect from the French engineering firm Rice, Francis, Ritchie (RFR). Specifically, through Martin Francis who is a trained and licensed architect who was also designing and building large sailing yachts in the south of France.naval architect but also does architectural works, such as the Louvre pyramid. We had worked with him a lot before in his yacht work and I would meet with him once a year and talk about applying tech of racing sailboats to buildings. Turned out we'd be working on the Louvre pyramid. We made tension rod assemblies that form the lower chord of the trusses that support the glass enclosure, some 3,600 of them. Looked better, were smaller. At that point we sold the yacht rigging business and focused predominantly on buildings.

What types of clients do you work with?
Are you selective in who you work with/what type of work do you accept?

We aren't that selective. We like to work with architects who don't know it all. Architects that think they can design every detail are probably not a client of ours. Our business is collaborative and makes the project better when every collaborator has a voice and is able to speak up on what they believe is the right approach forward based on their expertise and experience. The architect/engineer combination where everyone has good ideas and nobody is afraid of speaking their ideas. Moshe Safdie, the architect, is a great client. We worked with him on the Salt lake city library. The lens wall. In the course of two hours we came up with a bunch of ideas for this wall and you walk away with a wall that's pretty cool through community collaboration. We also worked with Raphael Vinoly - architect. When working on the tokyo international forum designing this large turnbuckle fitting in full scale on the ground. We got to the point where it was 3am and Raphael said we had one more go in us. And he was right, we did it better.

What is your process for engaging clients in projects?

What we have to show a client is a portfolio to convince the client that we can help them. Mostly it turns out you work with repeat clients. We are always looking for the opportunity for a specific project where we could really help another client. We follow our nose.

Once you're working with them, we would have group meetings with clients and contractors with concepts. Mostly drawings and digital models. Rarely do we use physical mockups. The project starts out as a collaboration. If you go out on the technological edge, go with a group that you trust and have confidence in you/them. You're looking out for each other and you trust each other.

Does making fit into your practice? If so, how?

Yes. Making is in everything we do.

Do you find clients respond favorably to physical items such as full scale mock ups or prototypes? Do they find these items helpful and engaging in their design?

Yes. People always like to hold an artifact in their hands. In most cases we don't produce mock ups along the way. Typically drawings and digital solid models. We don't share our iterations with clients and will only provide refined prototypes if the need arises.

Can your business provide a different type of project because of your model?

Not really.

Where do you see your practice going? Do you see it continuing to evolve? How?

Our design staff is about 13-15 strong and half are architects and half engineers. We'll work on intellectual challenges for new technology to be developed. Structural tech to be taken to market. In the course of our Apple work we started making bigger structural pieces that are exemplified by the Apple store in NY. Large plates on a truss. Needed a facility to create the 65' truss, needed to be able to finish these, needed to anneal the plates, etc. We didn't have this technology or capability in house so in order to service the customer we needed to find a way outside of our comfort zone and capability. We needed a partner. We worked with a vendor from California that had access with very large facilities for shipyards and aircraft. We've also used these facilities to make a precise sun shade for another project. Because of this branch out on this project we now have a collection of vendors to do large, precise jobs which expands our service offerings to clients. Not many other people can do that. We expand through jobs we have no idea how to do, we figure it out, and if we liked it and it was fun, we'll add it to the portfolio.

Ending comments:
Are there any comments you'd like to make in addition to the questionnaire above?

Finished reading Moshe Safdie's autobiography - his philosophy as an architect is interesting. He absolutely swears by making models. Working with customers, useful for design. In one project he made a full scale mockup to see what the light was going to do.

Interview with: Steve Badanes, Jersey Devil Design/Build

How would you define or describe your practice/business?
What do you do? What services are you providing, and why?

Jersey Devil was a design/build practice for mostly residential projects. At the time, design/build was not allowed by the AIA because it was considered a conflict of interest, but that didn't deter Jersey Devil. All three practitioners, Steve Badanes, John Ringel, Jim Adamson were not licensed architects. It wasn't a big career move, but it was fun. Jersey Devil was a trio of guys who could go anywhere and provide a custom product.

How did your practice start?
Has it evolved since the beginning? If so, why did it evolve and in response to what?

Steve, John, and Jim graduated from architecture school in the 1960s but wanted something more from the profession. Started working for a company called Dirt Road that built Prefab homes in Vermont. Steve learned that a few guys, including David Sellers, were doing design/build in a place they called Prickly Mountain in Warren, VT. Steve and crew would do little pick up jobs such as building fences and decks. From there, Jersey Devil kind of evolved from those small projects. They landed their first home scale project, the Snail House in Forked River, NJ. They didn't have a business plan and weren't aggressive in closing new clients as well as didn't pursue spec homes. They also did not make a client base through the projects they designed and built since many of their clients did not require repeat work. They kept Jersey Devil going because it was fun.

What types of clients do you work with?
Are you selective in who you work with/what type of work do you accept?

Most of their projects were residential. However they did build the Montessori Island School in Tavernier, FL which was secured through a previous residential client. Steve considers they were selective in the projects they would take on. This selection process

included the constraint that the projects be located in nice places to work!

What is your process for engaging clients in projects?

Their process included doing drawings, scale models, and interviewing the client about the program. In the early days some clients worked with them on the site. Mostly for financial reasons. Steve recalls that this was a regular occurrence all the way through the Hill House project. Their clients wanted the experience of building their own home. As Steve called it, they wanted the "autographed model". Steve said they used to call these clients their patients.

Does making fit into your practice? If so, how?

Yes! Making was the whole idea. For design/build they would take some liberties with design once they got into construction and would change the project as it was being built. The thing that means the most to Steve is the hands-on skills that they employed on our projects. It's the most fun.

Do you find clients respond favorably to physical items such as full scale mock ups or prototypes? Do they find these items helpful and engaging in their design?

Yes, but who is going to pay for it is always a topic of concern. Jersey Devil would sometimes build somewhat of a mock up, but the whole design/build process was a continuous dialogue with the clients. Especially with those that joined us in constructing their projects.

Can your business provide a different type of project because of your model?

Steve feels that they were hopefully able to deliver a more custom product than other practices. However, there is probably a scale limit in the types of projects they were able to do. Steve liked the relatively small scale of the projects they worked on.

Does your business model impact project cost?
Is this something you measure/track when looking at your performance?

Yes. They were more experimental in our process. Which means they were typically slower. Which typically means more expensive. However, they were cognizant to stay within the original budget as best as they could.

Where do you see your practice going? Do you see it continuing to evolve? How?

It has been a while since Jersey Devil worked on any projects, but another Seattle design build practice, JAS, is very much an evolution of what Jersey Devil did. They have in house designers and in house cabinet shops, and framing crews. They are a pretty good design/build model.

Interview with: Kimo Griggs of Kimo, Inc.

How would you define or describe your practice/business?
What do you do? What services are you providing, and why?

Has a conventional architecture practice; a design services practice. Balance between designing new work & existing buildings/ restoration. Also has a design and fabrication company that often works with the projects of the architecture practice. The fabrication company provides items such as finishings, furniture, architectural details. Specialized work in preservation. Almost every project utilizes both practices.

How did your practice start?
Has it evolved since the beginning? If so, why did it evolve and in response to what?

Always liked to design and make things from jewelry scale to building scale. He went through the natural process of obtaining an architecture degree and license but always retained the making behaviors. The fabrication projects became more sophisticated and larger and the desire to design things and make things stayed constant. Worked in another architect's office after graduate school and realized he couldn't do the work he wanted to do in an existing office structure. Worked with a past professor of his for a few years and realized there was limited opportunity for growth in that environment so wanted to start his own business.

What types of clients do you work with?
Are you selective in who you work with/what type of work do you accept?

Works with individual owners of houses, buildings and businesses and is selective in the type of client he works with. For example, he works with institutions and private clubs, but emphasized he likes working with individuals whom he's able to build a relationship with. His design methodology is he designs things through the lens of himself, things that he would find pleasing and satisfying, but designs these things for clients. Meaning, he knows how to provide client satisfaction through this method. A surprisingly large amount of

projects he does he gets to use and enjoy. For example, A bar at the Somerset Club, A mexican restaurant that he designed, public seating he gets to enjoy and gets to see other people use, and squash courts at a boat club he is a member of.

What is your process for engaging clients in projects?

Generally knows the client and has a close personal relationship with them. His process is to establish what the project goals are and he tries not to do too much interpretation of their goals (i.e. keep assumptions to a minimum). He places effort on finding efficient, cost effective ways to achieve their goals which sometimes results in redefining the program for them by showing the client that their needs are overcomplicated. He designs solutions that are simplified, cost effective for their underlying needs. Used an example of one project where the client wanted to fix an interior problem in their home, but he was able to propose another solution that was the root cause of the interior issues. The proposal was 40% cheaper, fixed the interior issues, and also provided the client with a front porch!

Does making fit into your practice? If so, how?

Yes. He makes architectural components for his projects and other projects for architects through the fabrication business. Examples include public art and furnishes/finishings for architectural projects.

Do you find clients respond favorably to physical items such as mock ups or prototypes? Do they find these items helpful and engaging in their design?

Yes. Surprisingly engaging. He finds them to be much better than models because models, like drawings, are not always understood by clients. They don't see the way an architect sees but a full scale thing that they can experience helps them. It's like a sculpture and they like to keep it and it's real. A chunk of a building is a real artifact of theirs.

Can your business provide a different type of project because of your model?
Do you expect your projects to have increased longevity, have higher build quality, are more sustainable? Are these things you measure/track when looking at your performance?

Yes. Specifically, if he designs a detail that might be challenging because of cost or the contractor can't make the thing or isn't interested in learning or spending the time he is able to make it or help the client bid it out to other fabricators. If he can just make it, it's faster, less expensive, and provides him with an opening to have a better relationship with a contractor which potentially leads to future work. There's some respect built between builder and his practice with this model, but mostly it helps because he can design and make custom things for clients and has some level of control over the cost and price. If he can do it at cost and it's worth it to do so to better the architectural project he is open to that prospect.

Yes, all of those things. He can detail his projects to allow water to run off, ice to not form, and can use higher quality materials for custom items that he designs and builds. Feels he has more control over the quality of the project with this model.

Does your business model impact project cost?
Is this something you measure/track when looking at your performance?

Yes. Favorably. Because he can design and make custom things, he can incorporate these things more cost effectively into a project. He can choose to make things at a discount as he wants to provide a service to the client. Emphasized that he didn't want the client to feel taken advantage of through this process as the client relationship was more important than higher profits so he would design things that could be bid out to other people. Ultimately, he felt it didn't matter who was making it, it was more about the design/ component being included in the project than the additional sale.

Where do you see your practice going? Do you see it continuing to evolve? How?

While the businesses are currently dormant, if they come back he sees them being small to medium sized practices with very close oversight of highly detailed projects for very specific clients (not corporate bodies. Clients aforementioned above). He wants to be engaged with someone who can make decisions on project direction.

Are there things that you do now that you wish you didn't have to in order to get your work done? Meaning, you have to rather than want to?

Yes. The business model necessary for me to do the work that he does requires lots of paperwork, client relations, and employee relations. He estimates that 50% of his time goes to running the business. Would consider a business manager/assistant to reduce this allocation.

Appendix C ~ Project C's Client Profile Questionnaires

QUESTIONNAIRE FOR CLIENT: #1

Tell me about your project.

2,000SF single family residence. Subdivided lot w/ roughly 100 ft x 50 ft buildable area, 7ft setbacks (N/S) 25ft setbacks (E/W). Desires 2-br w/ office/convertible into potential bedroom. Rec-room, Woodshop, attached garage, unfinished daylight basement, potential pickleball court, garden, elevator?, fireplace, significant western facing deck space, small back patio/deck (for morning coffee or when the western deck is too hot).

What are your project goals?

Capturing the views and a well appointed woodshop. Concerned about mobility/too many stairs, moving trash down to the street. Spends a lot of time in his existing kitchen and outdoors. A lawn, "to play frisbee with his grandson." The garage will be attached to the main house, but not essential to have the woodshop attached to the garage. Must not block the views of his neighbors, mostly the one above his lot to the east. Wants a wall to show off his art, family photos, armoires, and ample storage concerns.

What is your plan for your current residence? Do you see the two properties as being separate or integrated?

Separate. House would either be sold or rented. Should highly consider a "threshold" or break between the existing and future home.

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What do you like/appreciate about the site?

The views, likes the neighborhood, his garden.

How do you use your current home? What do you like about it? What would you change about it?

Spends a lot of time in his woodshop in his unfinished basement. Also spends a lot of time in the kitchen and the western deck taking in the stunning view. Loves the natural light qualities that enter the existing house, however the western windows (where the view is) had the shades pulled up. Is a fan of the white oak flooring. Made a comment on the laundry being in the basement and having to use the stairs (slight future concern). Shop is very small.

Where do you spend the majority of your time in your current home?

Kitchen, western deck, woodshop.

Do you - or anyone living in the house - have any hobbies?

Woodworking, gardening, kayaking/paddle boarding.

QUESTIONNAIRE FOR CLIENT: #2

What is the rec room for?

Good question. Since the kids moved out, it has been rarely used except as extra space for a guest bed and storage. In the new house, I would imagine a multi-purpose space that could serve as a media room and/or guest room.

Do you like to cook?

Definitely. The kitchen, dining and 'great room' will be a major center of activity.

How much time do you spend outdoors?

Weather permitting, I would spend the majority of my time outside, whether it's gardening or just relaxing on the porch/deck.

How large is your current workshop and how large would you like your dream workshop to be?

The current one is approx. 200 sq ft and a bit cramped so some of my work (assembly, etc.) spills out into the basement. I think 400 sq ft would be an ideal space.

Does the garage need to be attached?

2- Car garage? An attached garage would be nice, but an outdoor foyer has some appeal as well. Need to review the pros and cons of that. Definitely need a 2-car garage at minimum.

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Where do you envision storing your kayaks?

Good question; I'm actually considering selling them and staying with my paddle board which can be readily stored in the garage.

Are you a morning or night person?

Not sure how to characterize myself in that respect. Kinda depends. Sometimes enjoy getting up early to get a good start on the day but also stay up late on occasion.

Do you like to host parties?

Yes. Not usually big ones, but 2 or 3 couples, more commonly.

Do you envision watching TV in the living room or rec room?

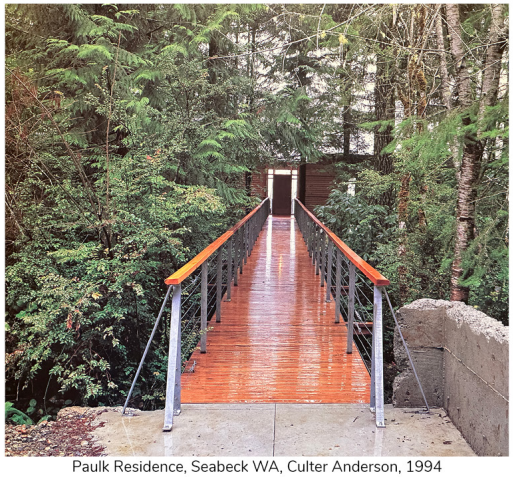
Most probably in the living room.

Do you want a dining table? Or a large kitchen island to eat at?

Definitely a dining table and a large island would be desirable as well.

Appendix D ~ Project C's Selected Core Patterns

Entrance Transition



Paulk Residence, Seabeck WA, Culter Anderson, 1994

The transition space between the outside world and the home.
The transition between public and private life.

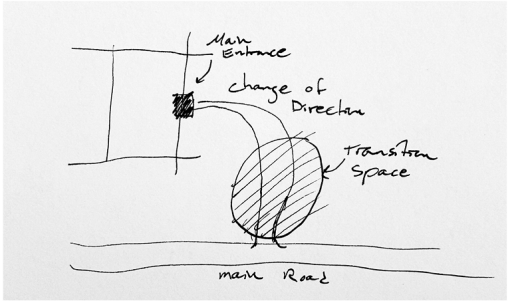
***

A graceful transition between the home and the world, especially the neighboring street, can create a wonderful feeling of tranquility as you approach your sanctuary. If an entrance is too abrupt or has close proximity to the road that it connects to this feeling of sanctuary will be greatly hindered.

Therefore:

Make a transition space between the street and the front door. Bring the path which connects street and entrance through this transition space, and mark it with a change of light, a change of sound, a change of direction, a change of surface, a change of level, perhaps by gateways which make a change of enclosure, and above all with a change of view.

Alexander, Christopher. A Pattern Language



Diagram

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Main Entrance

City Cabin, Seattle, Jim Olson, 2015

The welcoming moment of your home. The threshold that melts the world behind you and invites you to breathe deeply and safely.

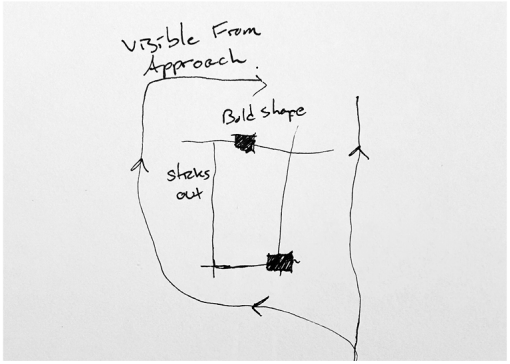
***

Placing the main entrance is one of the most important steps during the evolution of a home's plan. The position controls the layout of the home and needs to be placed in a way that is visible, or provides a hint of where it is, to people arriving to the home. Ideally, the main entrance to the home is the first thing you come to, but it can be a part of a series of initial experiences to the home. Experiences such as the driveway, parking, and a walkway from the garage.

Therefore:

Place the main entrance of the building at a point where it can be seen immediately from the main avenues of approach and give it a bold, visible shape which stands out in front of the building.

Alexander, Christopher. A Pattern Language



Diagram

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Living Kitchen

Shaker Lake House, JAS Design/Build

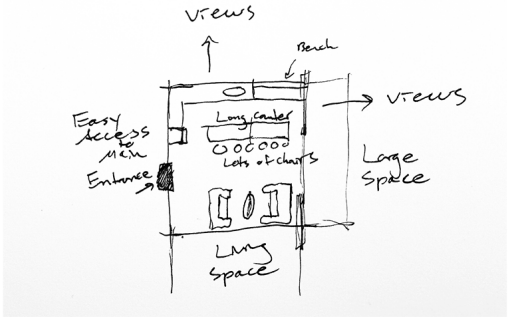
An expanded, inviting kitchen space that allows for more activities than simply cooking to occur. Living, cooking and eating can happen in a single space.

***

Some kitchens have been designed for the sole purpose of cooking and as such can be small, dark spaces within a home. They can also be separated from the rest of the home. Hidden in between walls and accessed through a small entry from a hallway. An isolated space. With these kitchens, a dedicated “dining room” will be required to have a space for eating. The person cooking the meals is also removed from any social interacts that are occuring in the rest of the home.

Therefore:

Make the kitchen space large and one of the main gathering places of the home and provide it with ample light and views to other spaces of the home and to the outdoors. Keep the living and dinning areas integrated with the kitchen so the spaces may integrate as one large space. Place the kitchen within the home plan in a way that grants inhabitants easy access to it.



Diagram

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Outdoor Room

The Dowel House, Seattle, Paul Hayden Kirk & Associates, 1954. Rennovated by Olson Kundig 2014.

A partly enclosed space that feels like an extension of the home. A place to sit, to eat, to gather, and to be still amongst the sun, wind, smells, and sounds of nature.

***

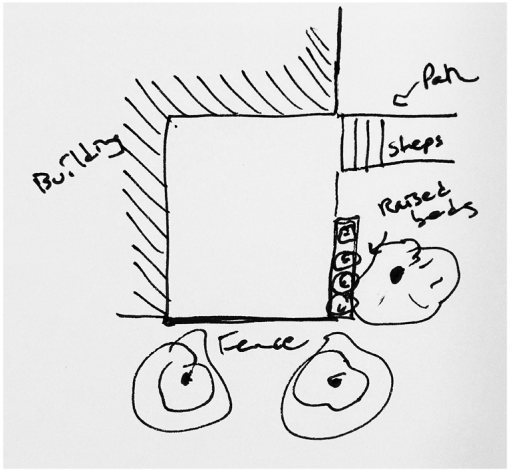
Outdoor living is an essential way of experiencing the majestic landscapes and temperate climate of the Pacific Northwest. But not all outdoor spaces can be considered outdoor rooms.

Outdoor spaces such as gardens and lawns are great for certain activities, but do not act as an extension of the home. They are separate places that are challenging to occupy as they are either large, exposed places or made for specific tasks.

Therefore:

"Build a place outdoors which has so much enclosure round it, that it takes on the feeling of a room, even though it is open to the sky."

Alexander, Christopher. A Pattern Language



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Appendix E ~ Client Engagement Journal for Project C

Week:	**1**
Date:	**4/10/2023**
Subject:	**Kickoff meeting with client**
Participation:	**Kristian Sundberg (designer), Client**
Duration:	**2.0 hours**

Overview:

Client and designer meeting to kickoff the design method experiment. Designer reviewed the methodology that was previously sent to the client and asked if there were any questions. The first two steps in the design method were then performed. Designer and client discussed initial program elements, design ideas, and the client. Designer and client then walked the site together and further discussed the core ideas of the project through the lens of “Patterns”. Designer and client then established 4 core patterns that may be explored further (Main Entrance, Entrance Transition, Living Kitchen, Outdoor Room).

Deliverables for next week:

Designer will perform step 3 in the design methodology. Designer creates a set of “Core Patterns” based on the site, the client, and the program. These patterns will act as the common language between designer and client. Early sketches and potentially a scale model will be created as well.

Goals for next week:

Designer and client will review the selected patterns, sketches and model(s). Will iterate on the patterns if necessary. Both will then walk the site and set a loose plan marked with string, flags, etc. to establish early spatial relationships of the patterns directly on the site.

Week:	2
Date:	4/17/2023
Subject:	Core pattern review, site walk & pattern plan
Participation:	Kristian Sundberg (designer)
Duration:	4.0 hours

Overview:

No meeting this week. Designer performed step 3 of the design methodology. “Designer creates a set of “Core Patterns” based on the site, the client, and the program

Deliverables for next week:

Schedule a meeting for next week and prepare a meeting packet.

Goals for next week:

Designer and client will review the selected patterns, sketches and model(s). Will iterate on the patterns if necessary. Both will then walk the site and set a loose plan marked with string, flags, etc. to establish early spatial relationships of the patterns directly on the site.

Week:	3
Date:	4/24/2023
Subject:	Core pattern review, site walk & pattern plan
Participation:	Kristian Sundberg (designer), Client
Duration:	2.0 hours

Overview:

Client and designer second meeting to run through steps 3-6 of the design method experiment. Designer reviewed the four core pattern’s templates that were created from the client’s selection and sent to the client the previous week (Main Entrance, Entrance Transition, Living Kitchen, Outdoor Room) and asked if there were any questions. No iteration is necessary at this time based on client feedback. Both walked the site and set a loose plan marked with flags and tape measures to establish early spatial relationships of the patterns directly on the site.

Client feedback was favorable in terms of spatial understanding of the patterns in relation to his site. Appreciated scale and the relationship between pattern positions and how they interacted with neighboring buildings and the western views he will enjoy. Also related appreciation for the process thus far has gotten

him to think about things he wasn't normally, such as sun position, privacy, views, elevation of the home on the site, etc. It felt like we were discovering qualities of his site together through our exploration and placement of the "pattern flags". Whether it was from the design method, simply spending time on the site, or both each of us found it immensely valuable. Discussed multiple options for positioning all patterns and the client is looking forward to playing with the flag positioning on his own. His personal engagement with his project is already showing improvements.

Designer and client also discussed potential full scale objects to add the to patterns laid out on the site to enhance the conversation. These included "door frames" for the Main Entrance pattern and connection between Living Kitchen and Outdoor Room, "window frames" for the same patterns, and potentially "shading louvers" to use for shade and/or privacy while inhabiting the "Outdoor Room".

Deliverables for next week:

Designer will perform step 7 of the design methodology. Firstly, Designer will sketch out multiple options of each full scale object proposed (Door frame, window frame, shading louver wall). Once designs have been identified full scale construction can begin.

Goals for next week:

Designer and client will review the selected full scale object sketches. Will iterate on the designs if necessary, but hope to identify the designs so construction can begin.

Week: 4
Date: 5/1/2023
Subject: Built object design and construction
Participation: Kristian Sundberg (designer)
Duration: 15.0 hours

Overview:

No meeting this week. Designer performed step 7 of the Method: Designer uses the Patterns and layout to design and construct an object or structure(s) to be erected on the site. Firstly, the Designer will sketch out multiple options of each full scale object proposed (Door frame, window frame, shading louver wall).

Deliverables for next week:

Have sketches for all three proposed objects. Built at least one object (movable door frame). Attempt to build multiple objects so we can interact with each and their relationship.

Goals for next week:

Designer and client will review the selected full scale object sketches and built items. Will iterate on designs.

Week: 5
Date: 5/8/2023
Subject: Built object design and construction
Participation: Kristian Sundberg (designer) & Client
Meeting Duration: 3.0 hours
Design & Construction Duration: 15 hours

Overview:

First meeting with built components to test on the site. Prior to the meeting the Designer performed step 7 of the Method: Designer uses the Patterns and layout to design and construct an object or structure(s) to be erected on the site. A framing system was designed to allow the quick assembly of varying lengths of apertures, which acted as proxy for doors and windows. Two “Flexible Framing” systems were built and brought to the site to test door and window placement and the relationships between them.

Designer and client set up the frames on the site and tested multiple sized frames for the Main Entrance Pattern (36 x 80” and 60 x 80”). A position was selected based on the flags that were set two weeks prior and were still on the site. Client and Designer then used the frame to discover what views would potentially be

involved within its boundaries. Specifically, would the client be able to see the house below his site or would he experience unobstructed views. This question then led to what elevation would the main floor of the home be and how would this change the view? Using the neighboring homes as estimates it was determined that the main floor would be roughly six feet above the current position of the door. Using the framing system to estimate elevations of design elements wasn't the original intention. Yet, it allowed us to discover the actual view (and feel the amount of earth work that would be required). Seeing a line above your head in physical space has a certain gravity to it that a line on paper doesn't.

To estimate the floor plate position of the Main Entrance we adjusted the top horizontal of the frame to be six feet above the ground. We then placed the other frame on the ground so that its bottom horizontal was at the same elevation, making sure the two frames were in alignment facing West. Looking through the frame at the elevation of the Main Entrance towards the frame located at the Main Entrance we were able to render a fairly accurate idea of the views. To the Client's elation his view would not be obstructed by the house West of his site.

Client Feedback:

When asked what could be made better, the client responded with wanting a way to "stand above the ground so as to feel like we're experiencing the house instead of just looking through frames as we stand in the grass. A platform will be constructed to allow us to do this and be able to set up a couple chairs on the platform as well. Also, leveling the frames was a challenge. We ended up leveling each base exclusively and with 2 gallon buckets. In relation to each other, the bases were slightly out of level. Finding a better leveling solution that's quick and reasonably effective would be great.

While we were erecting the frames, which were light (system weighs about the same as 2x4 framing) and easy to assemble (no tools required besides a mallet), the Client expressed their enjoyment of putting them together. "They remind me of Lincoln logs and TinkerToy!" The frames are built as a mortise and tenon system that are held together by dowels and gravity (the uprights just sit in their respective bases). This sense of play elevated the enjoyment of the test for both Designer and Client.

Deliverables for next week:

Have sketches for shading/privacy wall (6'). Make revisions to the framing system (fix bottom mortises, build a static platform for the 36" frame, build a 4x8' platform that can accept the framing system, and build the shading/privacy wall.

The forecast is 88 degrees and sunny next Monday. A good day to test out a shading wall.

Goals for next week:

Designer and client will review the selected full scale built items. The goal will be to have three full scale components (two frames; one with the large platform, one with small, and the shading/privacy wall). Will iterate on the designs one more time if necessary.

Week: 6
Date: 5/15/2023
Subject: Built object design and construction iteration 2
Participation: Kristian Sundberg (designer) & Client
Meeting Duration: 3.5 hours
Design & Construction Duration: 40 hours

Overview:

Second meeting with built components to test on the site. Prior to the meeting the Designer performed the second iteration of step 7. This included making small revisions to the framing system, an additional "Flexible Framing" system for a total of three, two shading/privacy components, lateral braces for all three frame systems, and a timber platform for client and designer to be able use as a proxy for "built space".

Following the same process as the previous meeting, designer and client set up the frames and the platform. The focus of the day was to test the relationship between the patterns of "Outdoor Room","Living Kitchen", and the relationships between each. Client and Designer positioned the platform within the flags of the "Outdoor Room" and at the "Best View in the House" spot (which

happened to be overlapping both “Outdoor Room” and “Living Kitchen” patterns. We erected the shading louver frame at roughly railing height (38”) and on the outside edge of the platform. This acted as a proxy for the edge of the “Outdoor Room” facing west towards the view. We then erected a second frame on the southern edge of the platform and attached the privacy frame to create a corner relationship with the shading frame. This corner acted as a proxy for the southwest corner of the “Outdoor Room”. Currently, there is no shade on the west facing site and the weather today was 86 degrees and sunny. The newly created shading corner was a much needed reprieve for both of us.

To test a potential “Living Kitchen” and “Outdoor Room” relationship we then removed the louver frame from the west edge and added a 6’ wide aperture on the east edge of the platform. Using the relationship of the frame and the platform in this iteration acted as a proxy for the transition between these two patterns. While the platform didn’t move from the previous test it was easy for both client and designer to recalibrate the relationship “position” since a different edge of the platform was being used. The 6’ wide by 6’ - 8” high aperture was selected as a potential kitchen door size (slider or french door) or large window overlooking the “Outdoor Room” from the “Living Kitchen”. This test then added the privacy frame 90 degrees to the south (same position as the first test) to experience a relationship between inside/outside transition and the southwest corner.

Client Feedback:

The client enjoyed having the platform to stand on as it felt like “Built Space” as it was easier for them to visualize a building compared to standing directly on the ground. Now that they have a good grasp on some of the relationships between patterns they would like to see where exactly these relationships play out in the form of drawings to help orient themselves to the overall design and reference to previous work we did with establishing pattern locations. This is partly due to the static placement of the platform. Because of its weight we weren’t able to easily move it to specific locations on the site to test relationships so had to pick a “best fit” location for all tested relationships. Client expressed a negative reaction to the shading louvers, especially in the open mode. His direct response was, “It feels like a prison.” This was due to the ½” thick louvers creating long, thin horizontals towards the view. Allowing these to slide away would eliminate this issue, or use a different design solution for the afternoon western sun. He did express a desire to place the louvers

above us somehow to test overhead shading as he liked the design in that orientation. The current version of the "Flexible Framing" system is unable to accommodate this.

When creating the southwestern corner relationship of the shading and privacy frames both the client and designer found themselves huddled amongst the shade to hide from the sun while they talked about potential privacy wall designs. The client then declared the moment as "A Shady Retreat" and thus created their first very own pattern which I promised to give him copyright ownership of.

The privacy frame tested three different designs within the 4' x 6' component. This was fun to talk through with the client and he expressed his interest in the 3 Dimensional option. The conversation then evolved into potential designs created with a CNC machine. As the client is a woodworker who prides themselves on detail and craft this was an exciting prospect.

Designer Feedback:

Platform was too heavy and time consuming to move and level to multiple locations on the site. Because of this, we found a good position where we could test multiple relationships at once. Mostly edge and corner relationships. A more refined, single unit platform would be helpful. Either making it lighter and easier to level so it can be moved to specific locations or larger and more flexible to accept more framing components. If larger, maybe 8x8' to allow both client and designer to inhabit the space and erect frames along the perimeter of the platform. Having a way to attach overhead components to test their relationships to walls/apertures would also be a nice addition. Components would have to be light enough for two people to attach.

Deliverables for next week:

Create a couple of hybrid sketches for the client to respond to. Consider other relationships that can be tested, including the (1) LK and OR northwest corner with a privacy frame (north edge of platform) and (2) the main entrance and transition space between the LK and garage with privacy frame.

Goals for next week:

Designer and client will review the first iteration of hybrid sketches and do one final iteration of built

component relationships to generate more hybrid sketches. We will then finalize with doing one final “View Framing” exercise where we’ll focus on specific views that aren’t necessarily positioned west to see if any interesting forms come from this.

Week: 7
Date: 5/22/2023
Subject: Hybrid Photos & “View Finding” Exercise
Participation: Kristian Sundberg (designer) & Client
Meeting Duration: 3.0 hours
Design & Construction Duration: 0 hours

Overview:

Third meeting with built components to test on the site. However, this third and final on-site meeting was primarily used for choreographing specific “scenes” that can then be used in hybrid illustrations. These hybrid illustrations consist of a photo which includes the client and built components that are setting a specific scene within a core pattern. Such as the Main Entrance. They can also be scenes that consist of multiple patterns that are testing their relationships. Such as the transition between the “Living Kitchen” and the “Outdoor Room”. The purpose of these photos is to anchor the client with the scale of the illustration that will be traced over the photos.

A set of seven photos that included the client were taken which included all four core patterns and three pattern relationships. A list of the photos is below:

1. Main Entrance exterior (one with 3’ door width and one with 5’ door with)
2. Entrance Transition exterior (to include Garage and Main Entrance within the shot)
3. Living Kitchen interior view
4. Outdoor Room exterior view
5. Outdoor Room w/shading and privacy test
6. Outdoor Room and Living Kitchen relationship (north option)
7. Outdoor Room and Living Kitchen relationship (south option)

A “View Finding” Exercise was also undertaken where the designer and client created a 2x2’ frame at eye level. This was accomplished by using the Flexible Framing System uprights and two feet horizontals. As the views on the site are predominantly west, and most neighboring homes all face west, the goal of this exercise was to explore whether there are other orientations for views besides due west. Our starting location was near the “best view in the house” spot on-site as the client was interested in looking southwest down the narrows at 240 degrees west-southwest. We then moved west down the site and positioned the 2x2’ frame towards the Tacoma Narrows Bridge towers at 342 degrees north. As we took in the view of the bridge towers the client began to think out loud on other views that he appreciated. The best sunsets typically happen right above Point Fosdick at 290 degrees west-northwest (Spring/Summer months). And they find themselves looking towards the tip of Day Island at 252 degrees west. We then explored where on the site these views could best be captured.

Client Feedback:

As this was the final on-site meeting for testing the proposed methodology the client was asked to provide feedback on the entire process. There responses are as follows:

- “I have a much better understanding of the spatial aspects and scale of certain design elements. I have a better sense of how many feet these spaces are and the amount of space between them relative to the site.”
- “The built components were an erector set of fun!”

- “Spending more time on the site helped me appreciate the lighting, temperatures, and winds and how built elements interacted with them.”
- “Having a physical [method to start with] was great. Now we can play.”

Designer Feedback:

The day was sunny and brisk due to the relatively strong winds coming out of the southwest. These winds had an effect on the built components which made them more of a challenge to move around. However, this experience helped anchor both the client and designer on the importance of these winds on specific design elements of a future project.

Overall the method proved worthy in establishing a common language between designer and client. The flow of the method was clear and concise for the client and each step built upon the previous one. Beginning with their specific needs and site constraints, establishing their project’s core patterns and laying them out directly on the site, erecting full scale elements to provide additional spatial cues and relationships, and expanding on these simple frameworks through hybrid sketches. The method is simple to use and efficient in establishing an early framework for the project. Though it does have some elements that require additional refining such as the built platform.

Further considerations on the built components would also benefit the method as during this test we found the “open apertures” to be the most useful due to their simplicity and ambiguity. Once more concrete design elements were used, such as the privacy and shading frames, the client began to react more towards their design than their purpose. Which was to act as a proxy for potentially built elements. In other words, these more defined elements could be potentially distracting while the open frames left you to your imagination.

In speaking with the test client at the end of the method they felt a stronger ownership over the design. They understood where things roughly could go, how large they could be, and what they could potentially feel like. There was a sense that we were able to get over the hurdle of they can do this. This is their project and they are involved.