8-2004

Building Perceptions

Andrew Michael Parks
University of Tennessee - Knoxville

To the Graduate Council:

I am submitting herewith a thesis written by Andrew Michael Parks entitled "Building Perceptions." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Architecture, with a major in Architecture.

Scott Wall, Major Professor

We have read this thesis and recommend its acceptance:

Jon Coddington, Chip Debelius

Accepted for the Council:
Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

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Anne Mayhew

Vice Chancellor and Dean of
Graduate Studies

(Original signatures are on file with official student records.)

b u i l d i n g p e r c e p t i o n s

A Thesis
Presented for the
Master of Architecture Degree
The University of Tennessee, Knoxville

Andrew Michael Parks
August 2004

Door handle detail
source: Peter Zumthor's Works

Abstract

A building is conceived for people. They look at it from the outside and just see it as a box. Then they come inside and say: "this room with its view to the garden is lovely." Compared with modern music or painting, architecture has a far greater potential for drawing in normal people; because something that functions well is practical and beautiful. People are then far more prepared to accept a new form, because they sense the link between form and content.

Peter Zumthor.

Thermal baths
source: Peter Zumthor's Works

Throughout the histories of modern architecture and modern landscape design, two distinct yet broad schools of thought have existed: the intellectual, or rational, and the experiential, or empirical. Intellectual works require a previously aquired knowledge of the analogy, symbol or representation which was used to rationalize each design move. By contrast, in experiential works, human emotions and senses are realized and are given heirarchical precedence in the thought processes of design.

The current growth of both techniques of presentation and representation via digital technology as a generative means of creating architecture has taken the inhabitants out of the design process in order for the architect to achieve his or her own personal agendas. Such works represent the pursuit of an "architecture of autonomy" whose target audience is the architectural elite. These intellectually and technologically driven processes produce architecture for architecture's sake resulting in the creation of inhabitable sculpture alien to everyday human activity.

Yet architecture has always possessed the capacity to engage the senses of its users, visitors and inhabitants in order to promote a heightened sense of awareness of the immediate architctural milieu. One's built surroundings can bring forth the realization that the work of architecture itself is conceived and built according to how a person might perceive, interact with and circulate through the spaces.

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01. Statement of Thesis

Architecture, more than any other form of art, has the ability to affect everyday life through its intrinsic qualities of human engagement. By a rigorous exploration of materials and assemblages, new perceptions of architecture can be built in which people begin to "see" and experience architecture differently. They begin to see past symbols, allusions and representations towards the qualities that are actually present and tangible. Because of this heightened awareness, structures are understood for what they are as well as what they mean.

It is the contention of this thesis that architecture can provide people with an experiential understanding of the way in which the built environment complements its natural surroundings. Architecture can highlight specific qualities, conditions and characteristics of the site for which it is

designed. This thesis explores the concept of experiential and physical connections in our built environment and how various expressions of materiality can engage people in a multi-sensory experience of architecture (fig. 01.01).

The vehicle for these ideas and explorations will be the design of an Interpretive Center at the entry to Cade's Cove on Loop Road in The Great Smoky Mountains National Park. The design of this new center is intended to enhance visitor knowledge and orientation with an introduction to the Cove by the use of various interpretive and interactive media. Topics of these exhibits will address the protection of the Cove's unique geological, natural and cultural resources.

fig. 01.01- Chapel materiality
source: Peter Zumthor's Works

fig. 02.01- Gardens at Stowe
Source: www.digital-fotofusion.co.uk

02. Introduction

Intellectual versus Experiential

In 1770 Thomas Whatley claims in his *Observation on Modern Gardening* that emblematic, or symbolically recognizable, objects attempt to recall absent ideas, but they do not make any immediate impression, as do expressive (experiential) objects (fig. 02.01). Throughout the histories of modern architecture and modern landscape design, two distinct yet broad schools of thought have existed: the intellectual, or rational, and the experiential, or empirical. Intellectual works require a previously acquired knowledge of the analogy, symbol or representation which was used to rationalize each design move. By contrast, in experiential works, human emotions and senses are realized and are given hierarchical precedence in the thought processes of design. In experiential works, human emotions and senses

are realized and are given utmost importance in the thought process for the design. These are works engage the human body and call upon the memory and imagination of the user to form individual responses to the spaces. The success of an experiential work is measured by the ability of the project to positively affect the individuals inhabiting or viewing the work without the necessity of a deeper understanding about the meaning of the piece.

Experiential architecture is conceived for people as it responds not only to notions of purpose, but also aspects of human interaction and perception. The primary goal of architecture is not simply to supply a media with which to perform experiments in the rearrangement of building elements into multiple variations, or the syntactic processes of design, so that a structure exists in the world without dependence on an inhabitant nor a viewer nor even the architect to achieve its 'full self-presence'. A true assessment of a structure can therefore only be made by those for whom the design was intended, not merely by the successful manifestations of architectural ideas.

"Perfection in execution cannot be measured or defined in terms of execution; it implies those who perceive and enjoy the product that is executed. The cook prepares food for the customer and the measure of the value of what is prepared is found in consumption."

(John Dewey, Art as Experience, p. 47)

The early works of Peter Eisenman were so deeply rooted in theoretical issues that they were, in fact, dependent on his writings to be recognized as architecture and to prevent being classified as minimalist art. With ideas of architectural self-sufficiency and syntactic organizations being the main focus of his works, a total disregard for function exists. Such an overemphasis on the intellectual and conceptual dimensions of architecture further contributes to a disappearance of the physical, sensual, and embodied essence of architecture. (Juhani Pallasmaa, "An *Architecture of the Seven Senses*," p. 29). These are the aspects of architecture which supply the connection of the occupant to his or her built environment through awareness.

It is quite possible to enjoy flowers in their colored form and delicate fragrance without knowing anything about plants theoretically. But if one sets out to understand the flowering plants, he is committed to finding out something about the interactions between soil, air, water and sunlight that condition the growth of plants.

(John Dewey, Art as Experience, p. 4)

Eliot Deutsch expresses his thoughts on human experience and art in his book *Essays on the Nature of Art.* He asserts that in aesthetic experience the inherent significance of the artwork presents itself to us as something to be recog-

nized rather than something to be known conceptually (Eliot Deutsch, *Essays on the Nature of Art* p. 31). Experiential works are made meaningful by each person's initial impression or reactions whether it be by vision, touch, smell or sound.

Finnish architect and critic Juhani Pallasmaa describes these cursory reactions to architecture and other arts as a "pure looking" similar in nature to a child's way of experiencing things. This pure looking, or seeing, is an, "understanding through the senses." It is an understanding that tells us what things are, not what they mean. (Pallasmaa, Juhani, "The Geometry of Feeling: A Look at the Phenomenology of Architecture" p.185). A child's experiences are simply based on initial impression which are derived from his or her current surrounding conditions. Since the child does not have a large selection of prior experiences on which to draw comparisons, he or she cannot truly attain a sense of whether the current conditions are positive or negative. Yet, the experience is taken at face-value and subsequently categorized by the qualitative characteristics that can be assessed by the use of touch, taste, smell, sight and sound.

Peter Zumthor similarly claims that design is probably more re-discovery than invention. This means to re-configure, to re-cognize, to re-assemble impressions and emotions which have been experienced can be consciously recalled. He offers the following example to illustrates his point:

> There was a time where I experienced architecture without thinking about it. Sometimes I can almost feel one particular door handle in my hand, a piece of metal shaped like the back of a spoon. I used to take hold of it when I went into my aunt's garden. That door handle still seems to me like a special sign of entry into a world of different moods and smells.

Though Zumthor's claim that certain qualities of a design can recall similar impressions to each person who experiences presupposes that everyone has had a similar experience on which to reflect, thereby employing processes of thought. Rather, he draws upon his own memories and experiences for design inspiration and tries to recreate them, not symbolically, yet experientially so that each person can have a unique impression based on there own past situations.

The current growth of both techniques of presentation and representation via digital technology as a generative means of creating architecture has further removed the intended inhabitant from the design process in order for the architect to achieve increasingly complex shapes and visual compositions (fig. 02.02).

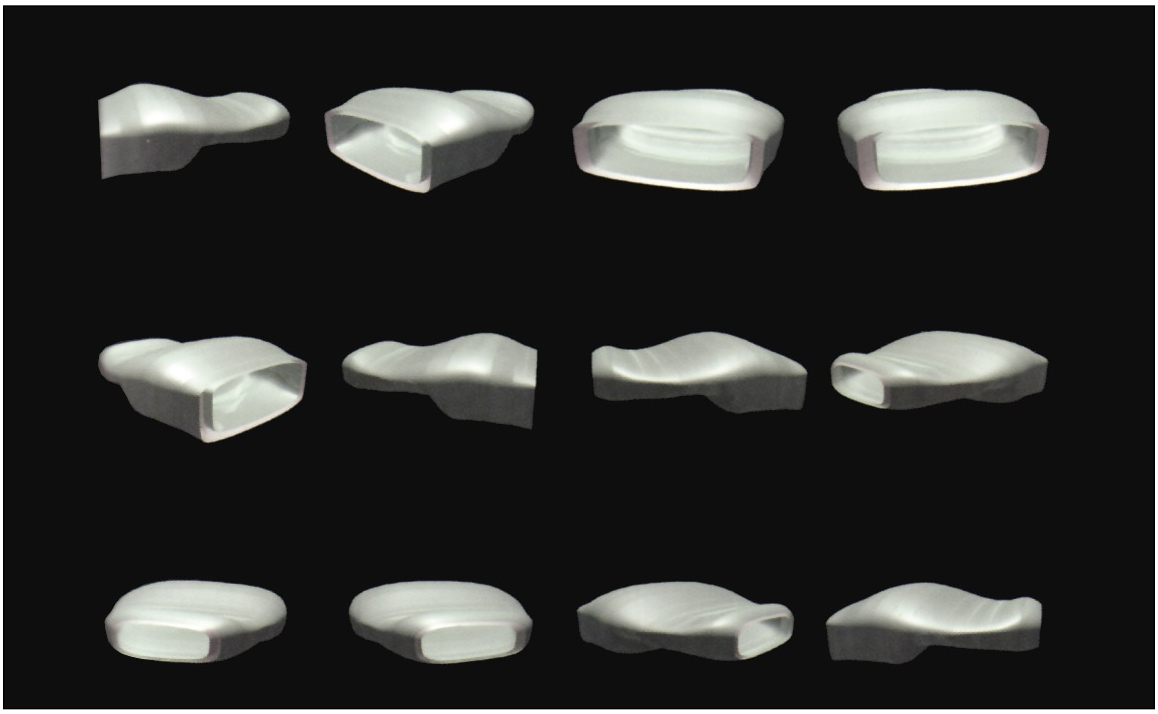


fig. 02.02- Greg Lynn
Source: Hybrid Sace : New-Forms in Digital Architecture

fig. 02.03- Diller + Scofidio
Source: Hybrid Sace : New-Forms in Digital Architecture

These mathmatically-derived, computer-generated processes produce amoebic and geometrically complicated formal architecture simply for the sake of architecture or the architect (fig. 02.03). The outcome of this process is the creation of 'inhabitable sculpture' that ,as a result, is divorced from everyday human activity. Such works represent the pursuit of an 'architecture of autonomy' whose target audience is the architectural community. Yet, occasionally, against the architects avant-gardist intentions, these designs become fashionable and are subsequently consumed by the general public. Every person who encounters these works is expected to have a prior knowledge of the subject in order to attain the full impact and meaning of the work. If this prior knowledge is not present, then an explanation of the design motivation is necessary (fig. 02.04, 02.05).

The antithesis of this school of thought lies in the written and built works of Peter Zumthor. In explaining his views on how a work of architecture should communicate to its users, he states:

"I personally like the idea of designing and building a house from which I can withdraw at the end of the forming process, leaving behind a building that is itself, that serves as a place to live in and a part of the world of things, and that can manage perfectly well without my personal rhetoric...a building that is being itself, being a building, not representing anything, just being."
(Peter Zumthor, Thinking Architecture, p. 32)

fig. 02.04- Daniel Libeskind Holocaust Museum 1
Source: http://fcit.usf.edu/holocaust/

fig. 02.05- Daniel Libeskind Holocaust Museum 2
Source: http://fcit.usf.edu/holocaust/

John Dewey, in his book *Art as Experience*, explains that the material of the fine arts consists of qualities. Those works having rational origins are signs or symbols have no intrinsic quality of their own, but stand for things that may in another experience be qualitatively explained. This is one reason why strictly intellectual art will never be popular as music is popular. (John Dewey, Art as Experience, p. 38).

Experience + Perception

In 1712, Joseph Addison explored the idea of expressive works as 'pleasures of the imagination'. He explains that one experiences predominantly through the sense of sight. The mind not only receives information, but retains, alters and combines the images into all the varieties of picture and vision. Yet architecture, by its multi-dimensional nature, not only depends strongly on our vision, but also on the rest of the senses of the human body to give deeper levels of meaning to the experience of space and time both conscientiously and subconscientiously. Modern consciousness and sensory balance have gradually developed towards an unrivaled dominance of the sense of vision. As a consequence of today's 'hegemony of the eye' over other sensory realms, architecture has become an art form of the instant visual image.

Yet Alvar Aalto clearly acknowledges that we confront the environment through our entire bodily and sensory existence, not solely through the judgment of the eye. (Pallasmaa, Surface, Touch and Time p. 24) In his episodic architecture, Aalto suppresses the dominance of a singular

visual image. His is an architecture that is not dedicated by a single conceptual idea down to the last detail, but which grows through separate architectural scenes, episodes and detail inventions. The whole is held together by maintaining a constant emotional atmosphere, an architectural key, as it were, instead of an overpowering intellectual concept. (Pallasmaa, "Surface, Touch and Time" p. 26) Much of today's architecture supports a uniformity of terrain and floor, leveling of wall surfaces, uniformity of brightness and shadow, as well as the elimination of temperature differences, all of which further enforce the exhausting flatness of experience. (Pallasmaa, "Surface, Touch and Time" p. 21)

Craft + Material

Typically associated with works of the hand is the word "craft". To craft something means to make or produce with care, skill, or ingenuity. Whether or not a person finds a masterfully crafted quilt or piece of furniture aesthetically pleasing according to his or her own taste, there is still a sense of appreciation for the time and care that went into the creation of the piece.

Juhani Pallasmaa writes about modern architecture's loss of tactility in both the scale and detail crafted for man's body and hand. In turn, structures become repulsively flat, sharp-edged, immaterial and unreal. He claims that the detachment of construction from the realities of matter and craft turns architecture into stage sets for the eye, devoid of the authenticity of material and tectonic logic. (Pallasmaa, "An Architecture of the Seven Senses" p. 29) He goes on to

fig. 02.06- St. Benedict's Chapel
Source: *Peter Zumthor's Works*

say that the modernist architectural surface is an abstracted boundary of the volume; surfaces have a conceptual rather than a sensory essence. (Pallasmaa, "Surface, Touch and Time" p. 19)

St. Benedict's Chapel in Sumvitg, Switzerland by Peter Zumthor provides an example of an architecture that exemplifies a unity of construction and the realties of materials and craft (fig. 02.06). The chapel is a leaf-shaped, cylindrical structure that is bermed into the hillside, which is reminiscent of the way in which the silos of eastern Europe make the connection between earth and structure. The approach to the structure reveals a simple silhouetted form against the mountains (fig. 02.07). Zumthor claims that if architecture emerges from simple forms, then the reality of the materials can be sensed (fig 02.08).

fig. 02.07- Chapel elevation
Source: *Peter Zumthor's Works*

fig. 02.08- Details of Chapel
Source: Peter Zumthor's Works

Upon closer inspection, the tactility and patina of the of the materials become apparent, though not merely as a cladding but as an integral part to the of the composition as a whole. The interior consists of exposed timber framing and custom furniture which exhibit Zumthor's carpentry roots and careful approach to craft. He attempts to give materials a poetic quality in the context of architecture by revealing their tangibility, smell and acoustic qualities. The belief that the core of all architectural works is in the art of construction resonates in all of Zumthor's works.

In his phenomenological investigation of artistic language, Gaston Bachelard makes a distinction between "formal imagination" and "material imagination". Images arising from matter project deeper and more profound experiences than images of form, according to Bachelard's view. The immaterial surfaces of modernism tend to remain mute, as shape and volume are given priority. (Pallasmaa, "Surface, Touch and Time" p. 19)

Our culture of speed, in many aspects, favors an architecture of the eye that aims to communicate via instantaneous images. Tactile architecture is inherently an architecture of slowness, as it is appreciated and comprehended gradually, detail by detail, as "images" of the body and the skin. The sense of touch suppresses the dominance of the visual image, through enhancing the plasticity, tactility and intimacy of the architectural experience. (Pallasmaa, "Surface, Touch and Time" p. 21) Alvar Aalto's surfaces address the skin and present an invitation to an intimate encounter. Careful ergonomic detailing, crafted for the body and the hand, further

enhance the tactile experience (Pallasmaa, 'Surface, Touch and Time' p. 21) The difference between the aesthetic and the intellectual is thus one in which emphasis is placed on the constant rhythms that mark the interaction of the live creature with his /her surroundings. (Dewey, Art as Experience p. 15)

On first acquaintance we gain a general impression of a place or a building in terms of its form, color, and material as revealed in light and shadow. If one is able to examine that place or building more closely, this initial impression will be modified as we become aware of the detailed perceptions that make up the impressionistic whole. Normally our perception works from the general toward the particular - quite the opposite from the way the human brain processes vision. Details are nevertheless essential components in structuring our consciousness of things and our memory of wholes. (Malcom Quantrill, Environmental Memory p. 46)

Dutch architect Herman Hertzberger contends that depending on our standpoint and our objectives, we experience a layered reality. It is therefore the role of architecture to "reveal" more — to make the different levels of experience transparent, as it were — and thus to shed more light on how the world things work and how they are interconnected. The exposure of unexpected layers of meaning by twentieth century art and science has changed our way of seeing, and therefore also the way we feel. (Hertzberger, Lessons for Students in Architecture, p. 226) The way a building is put together and how it works, should be "perceptible" to its users: Instead of a layer of stucco covering everything

up, for instance, it is better to show the actual building bricks, the beam, columns of steel and concrete, and the lintels over the windows. It might not be such a bad idea to leave at least some of the 'innards' of the building exposed to view, too, to make people more aware of the effort that goes into creating a satisfactory dwelling (fig. 02.09). In the nineteenth century, with its techniques firmly rooted in the craft tradition, this was obviously not as important as it is today, with the increasing alienation - also in architecture - of man from his environment. (Hertzberger, Lessons for Students in Architecture, p. 241)

fig. 02.9- Peter Zumthor
Source: Peter Zumthor's Works

fig. 02.10- Strawberry Vale elevation
Source: Patkau Architects

An example of the way in which a structure can complement its natural surroundings and attain a level of fitness with its site is Strawberry Vale Elementary School by Patkau Architects. This exemplifies the idea of a structure existing at the edge of nature providing a threshold — a gateway — between the trees and the more open part of the site (fig. 02.10). The structure does not intend to make a distinct separation between the natural and the man-made becoming an object in the landscape, rather it embraces nature and brings it into it's constructed outdoor spaces. Though the structure embraces and welcomes nature it does not try to blend in an effort to mimic its natural surroundings. The structure compliments it's natural surrounds in relation to scale and choice of materials as wells as it's response to environmental issues such as how the rain water will drain, which areas should be shaded or sunny, and how light will penetrate into the interior spaces. An emphasis on the horizontal relates more to the human body and maintains a strong connection to the earth.

fig. 02.11- Strawberry Vale courtyard
Source: Patkau Architects

The structure offers outdoor spaces that are an extension of the interior spaces to provide an experience of the outdoors. Elements of the natural and the man-made are woven together to blur the distinction between inside and outside. Multiple levels of interior and exterior exist to make this inside/outside distinction less apparent. Deep overhangs functioning both as shading devices and as elements of enclosure offer a similar experience to the canopies of the surrounding trees (fig. 02.11).

Although completely separated from the outdoors, the qualities of the interior spaces give the feeling of being in an open air shelter (fig. 02.12). These interior spaces enclose and protect, at the same time, imply extensions into the space of the woods (fig. 02.15). Light serves an important function in the structure in that it provides the visitor a strong connection to the outside world even when a visual connection is not possible. Breaks and overlaps in the roof plane allow light to penetrate in to the spaces and draws the visitor into specific spaces (fig. 02.13,02.14).

Subtle changes in elevation of the floor plane allow a person's focus and attention to be redirected. One is made more aware of spatial changes from by interaction with the floor plane.

fig. 02.12- Strawberry Vale classroom
Source: Patkau Architects

fig. 02.13- Strawberry Vale corridor
Source: Patkau Architects

fig. 02.14- Strawberry Vale entry
Source: Patkau Architects

fig. 02.15- Strawberry Vale outdoor room
Source: Patkau Architects

fig. 03.01- Primitive Church
Source: Author

Site Background

Within the Great Smoky Mountains National park exists a flat valley surrounded by the Appalachian Mountains know as Cades Cove. Once home to Cherokee Indians, the Cove was settled by people from Tennessee, North Carolina and Virginia. Settlers began inhabiting the land by building homes, churches, and mills (fig. 03.01). The fertile soils provided crops and the streams and forests provided ample food sources for the settlers.

The treasured collection of late 19th century vernacular architecture and abundant wildlife easily visible across the open meadows attract millions of people to the Cove each year. The Cove was listed on the National Register of Historic Places in 1977 when it was recognized for its collection of thirty historic structures at ten sites.

Touring the Loop Road in a private vehicle is the primary recreational activity of most Cove visitors, though some choose to bike or hike. Today, during peak periods, more than 4,000 vehicles enter the Cove each day to travel the 11 mile Loop Road that follows the contours of the Cove's mountain valley terrain.

Cades Cove Opportunities Plan

The Cades Cove Opportunities Plan is intended as a means by which to develop a long-range management vision to protect the Cove's natural and cultural resources and ensure a continued quality experience to the approximately two million visitors per year. The following values from Great Smoky Mountains National Park's 1998 Access Issues at Cades Cove report describe the:

- scenic beauty and sweeping vistas of Cades Cove
- importance of the Cove's historic setting and representation of Smoky Mountain culture
- need to protect and enjoy wildlife
- importance of the Cove as a place to recreate, socialize, be inspired or educated

This long-range management plan will provide a program of actions to improve visitor experience, preserve and restore resources, provide adequate facilities and infrastructure capacity, and increase the level of information and education that visitors receive. This plan will also provide a holistic approach to the development of alternatives that address the issues within the Cove. (fig. 03.02-03.04)

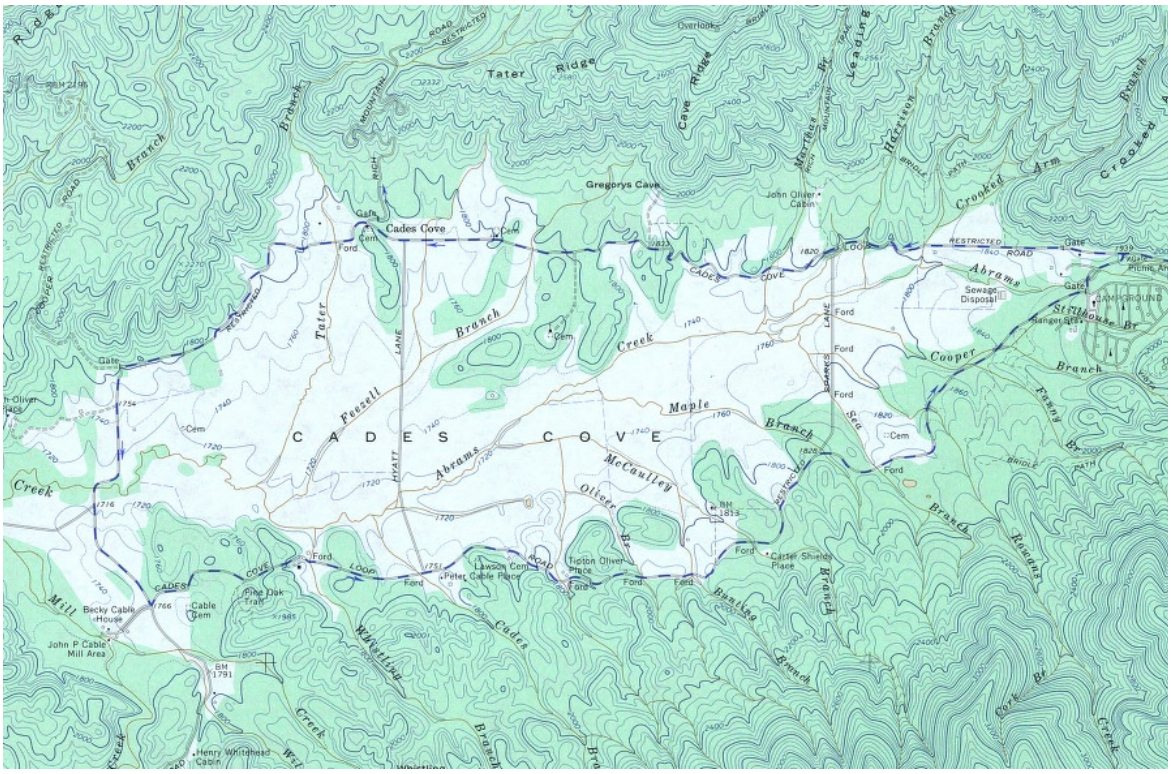


fig. 03.02- Topo map
Source:USGS

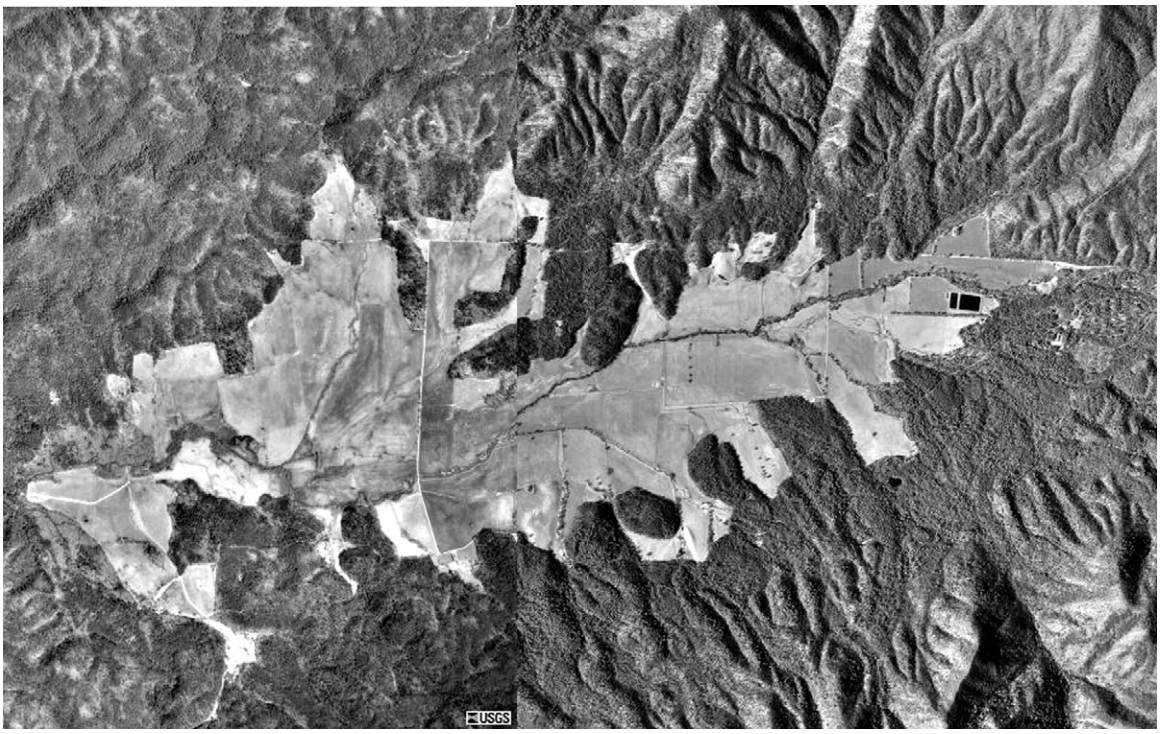


fig. 03.03- Aerial photo
Source:USGS

fig. 03.04- Diagram. Documents existing conditions and proposed improvements by the Cade's Cove Opportunities Plan Source:Great Smoky Mtns. National Park

The Cade's Cove Opportunities Plan has developed five alternatives ranging in scope from minimal roadway improvements to upgrading sinage, widening roads, upgrading overall park facilities, the addition of a new visitor center and possibilities of a new transit shuttle system through the cove. Additional studies and the development of an environmental impact statement will continue during the next phase of the plan to help decide which alternative will be the most economically, environmentally and culturally viable option for the park and the cove in particular. Continued public involvement is expected to play an important role in the decision making process as an alternative is chosen.

Site Description

To address the issue of improving visitor experience, an attempt will be made to increase the level of information and education that visitors receive. A visitor center at the entry to the cove is one alternative's proposal to assist in achieving this goal.

fig. 03.05- View on approach to Cades Cove Source:Author

The entry to Cades Cove is approximately seven miles from the main entry to the National Park. This seven mile drive consists of a two lane road that winds its way up through the dense forests of the Smoky Mountains. This approach sequence affords a few opportune openings in the thick entourage at specific moments along the drive that offer framed vistas of the distant mountains (fig. 03.05). Near the end of the overall dark and serpentine drive in route to Cade's Cove, the trees seem to open up and the drive becomes brighter. A long clear strip of land runs parallel with the road to South were at the end is an information and orientation kiosk. This structure lies within the main view shed into the cove. Once past this structure, one gets the first glimpse of the enormity and vastness of the rolling open meadows of the cove. (fig. 03.06-03.17)

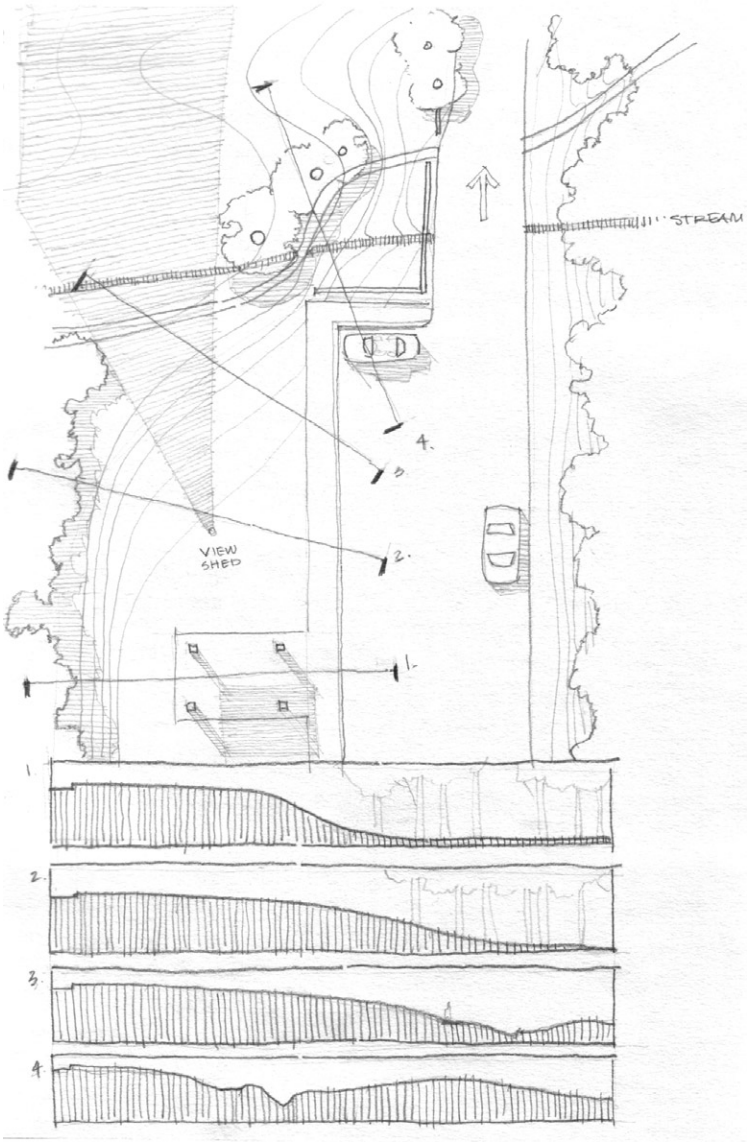


fig. 03.06- Cove entry sketch
Source: Author

fig. 03.07- Approach to site
Source:Author

fig. 03.08- View above site
Source: Author

fig. 03.09- Map of adjacent campgrounds and existing park facilities
Source:Great Smoky Mtns. National Park

fig. 03.10- Aerial photograph showing existing structures
Source:USGS

fig. 03.11- Aerial photograph of immediate site. Shows existing stables to be re-located for parking for the visitor center
Source:USGS

fig. 03.12- View of existing stables
Source: Author

fig. 03.13- View of surrounding ridge
Source: Author

fig. 03.14- Primitive Methodist Church
Source: Author

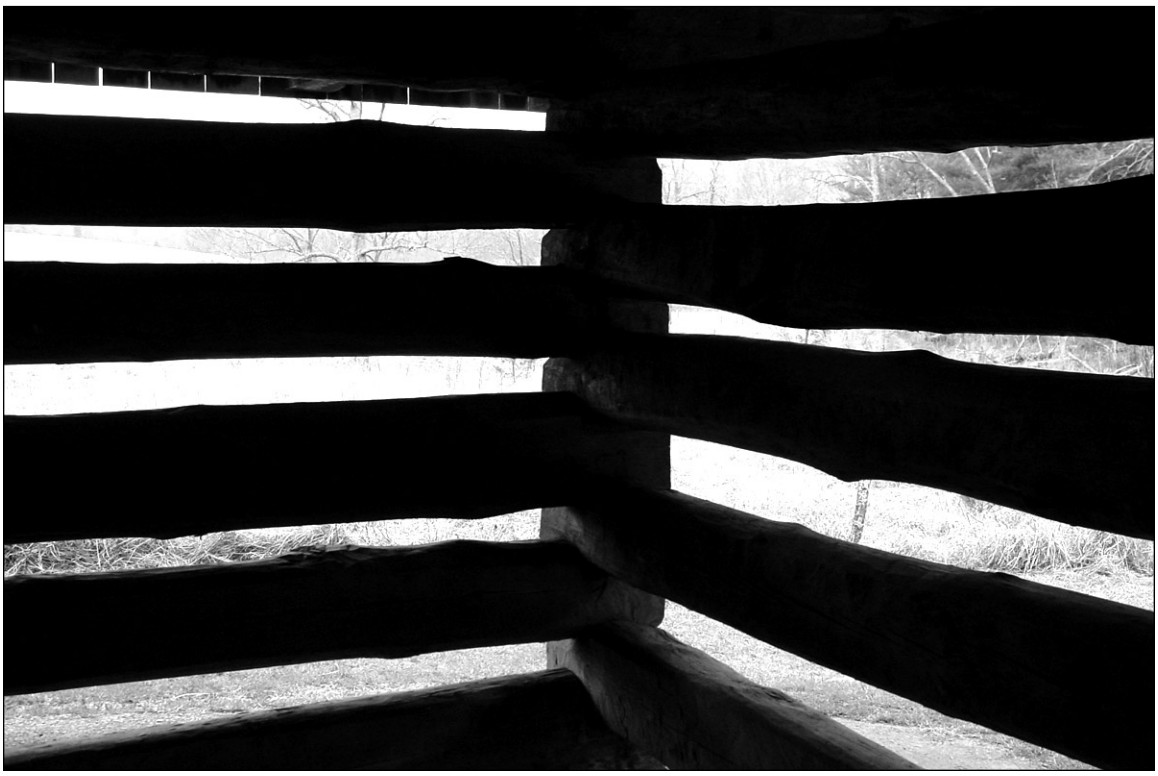


fig. 03.15- Cantilever Barn
Crib interior
Source: Author

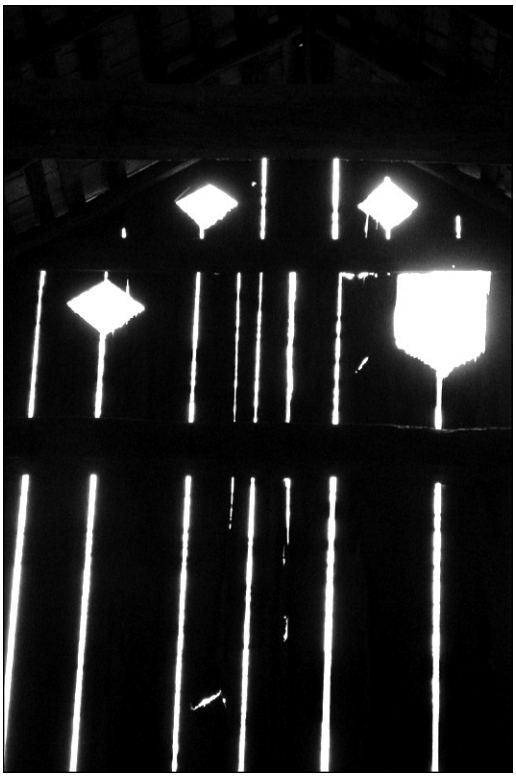


fig. 03.16- Cantilever Barn gable interior
Source: Author

fig. 03.17- Log Barn interior
Source: Author

04. Program

Program Description

The decision to choose an interpretive center as the vehicle to explore the thesis ideas was based on the inherent didactic quality of the building typology. The communicative potential of this program type to 'open the eyes' (and senses) of the general public and to create a heightened awareness of one's surroundings is unparalleled.

Lobby

This space will be an open, well-lit space that welcomes the visitors and offers cursory orientation to the center and the cove. This space provides access to an information desk, restrooms, exhibit space, observation deck and the auditorium. The main focus of the space will be a dramatic view of the rolling meadows and will act as the main "window to the cove".

Displays and exhibits

This space offers the visitor an introduction to both the rich natural and cultural history of the cove by means of interpretive and interactive exhibits, historical text, images, and artifacts. This experience will provide a cursory understanding which can be further explored and investigated during the trip through the cove. Gallery-like natural light washing walls constructed of tactile materials. Sequenced unobstructed framed views will contribute to the visitor's orientation and overall experience.

Amphitheater + observation deck

This space provides a multi-purpose outdoor venue in which educational opportunities, demonstrations, small performances and gatherings can occur.

Bookstore, reading room, and gifts

This space will allow the visitor to gain a more in depth knowledge of the Cove's histories and activities by means of brochures and books as well as serving as an outlet fir locally produced crafts and arts. Visitors are encouraged by the space's warm materials and inviting feel to spend some time here. Lounging on a couch by the fire place or reading a book in a chair with spectacular views to the cove. Horizontal bands of windows will emphasize the cove's expansiveness. This space could provide campers and bikers with a place to wait out a storm or pick up a map of all the trails in the cove.

Admin. offices/workspace

This space will provide park rangers and administrative staff room to perform work and research. Natural lighting will be an important feature for the performance of this space.

Discovery room /Meeting room

This flexible, multi-purpose room will provide an indoor space to for educational opportunities, such as ranger led programs, and small meetings for camping groups or administrative meetings.

Auditorium/Theatre

This space provides the visitor with initial visual stimulus by means of state-of-the-art digital projection and audio systems. This experience is intended to the spark the curiosity of the visitors through an orientation film. This space could also serve for presentations, lectures or large demonstrations.

Program Specifications

Lobby size: 700 s.f.

- provides gathering area
- adjacent restrooms and drinking fountains
- provides view of information desk and other key elements: exhibits, store, theatre

Restrooms size: 300 s.f.

• should accommodate peak use (60 school children who might have traveled for an hour)
• should be ADA compliant

Displays and exhibits size: 2,000 s.f.

Amphitheater and observation deck
size: large enough to accommodate 60 students
• should be accessible to meeting rooms and exhibit area
• seating is provided

Bookstore, reading room and gifts
size: 700 s.f. (+ 100 s.f. of storage)
• not to impede circulation in lobby
• storage closet for stocking brochures, books and merchandise
• seating is provided

Administration offices/ workspace size: 500 s.f.
• accommodate approximately 5-6 staff members
• three separate offices
• open shared work space
• ample storage
• break room with kithenette and table
• single restroom

Discovery room/ Meeting room size: 500 s.f.
• should seat 15-20 people around tables or classroom style
• small storage closet
• projection system and screen

Auditorium/ Theatre size: 500 s.f.

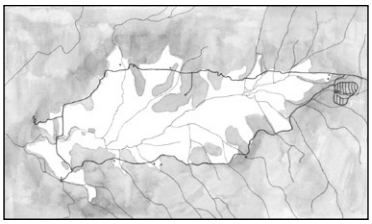


fig. 05.01- Watercolor of Cades Cove
Source: Author

05. Design

The process of embedding the ideas of the thesis into the project began with the analysis of the natural conditions of Cades Cove, considering the cove as the entire site for the design project (fig. 05.01). A graphic exercise began the analysis by looking at the cove at three different scales; the whole cove, the east rim, and the immediate site surroundings. The exercise consisted of the construction of three blocks of solid wood that were then carved as in interpretation of the cove at each scale (fig. 05.02). These carvings, as they narrowed in scale, began to reveal important aspects of the cove's experience. The main aspect was the concept of the forest and meadow experience of the cove as an edge condition (fig. 05.03,05.04). Second, was the textural qualities that emerged from the carving technique in representing exture of the forest versus smooth grassy texture of the meadow.

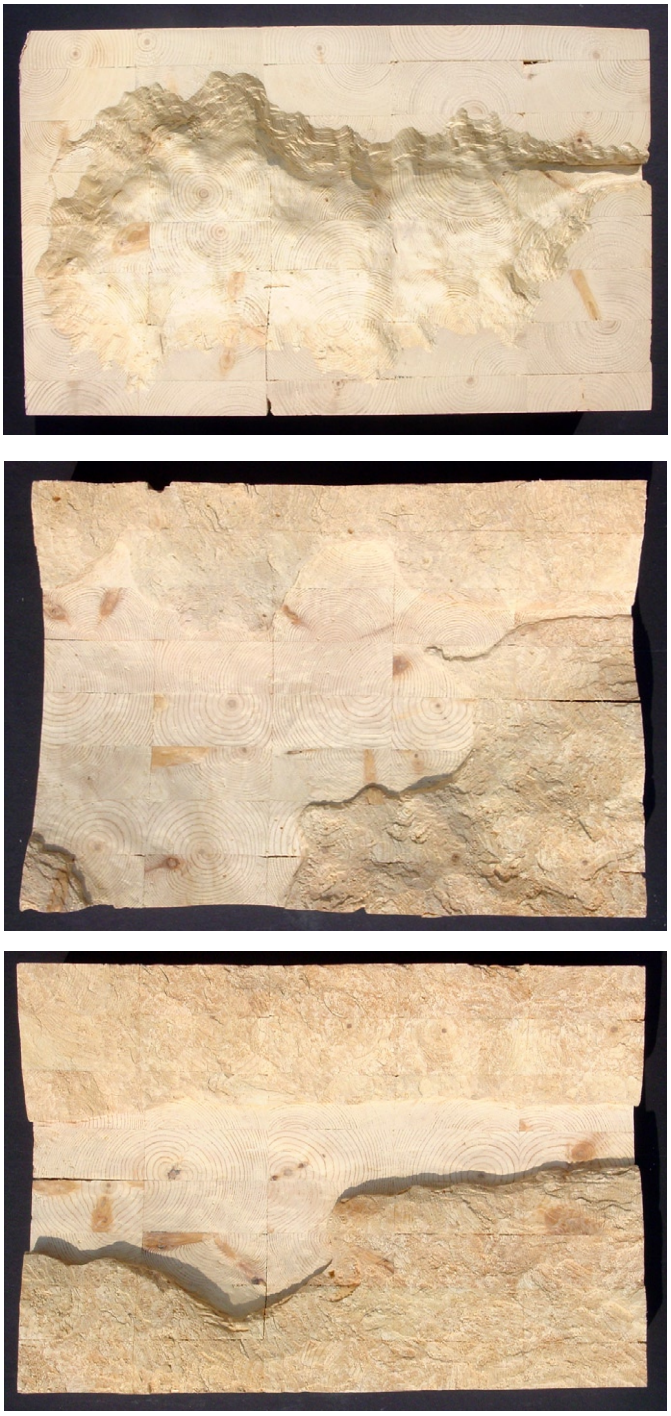


fig. 05.02- Carvings of Cades Cove at various scales
Source: Author

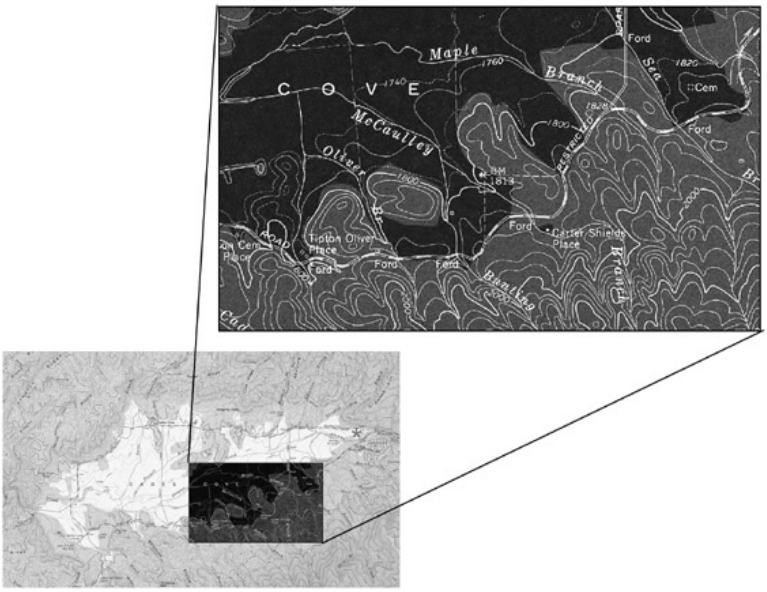


fig. 05.03- Edge condition diagram
Source: Author

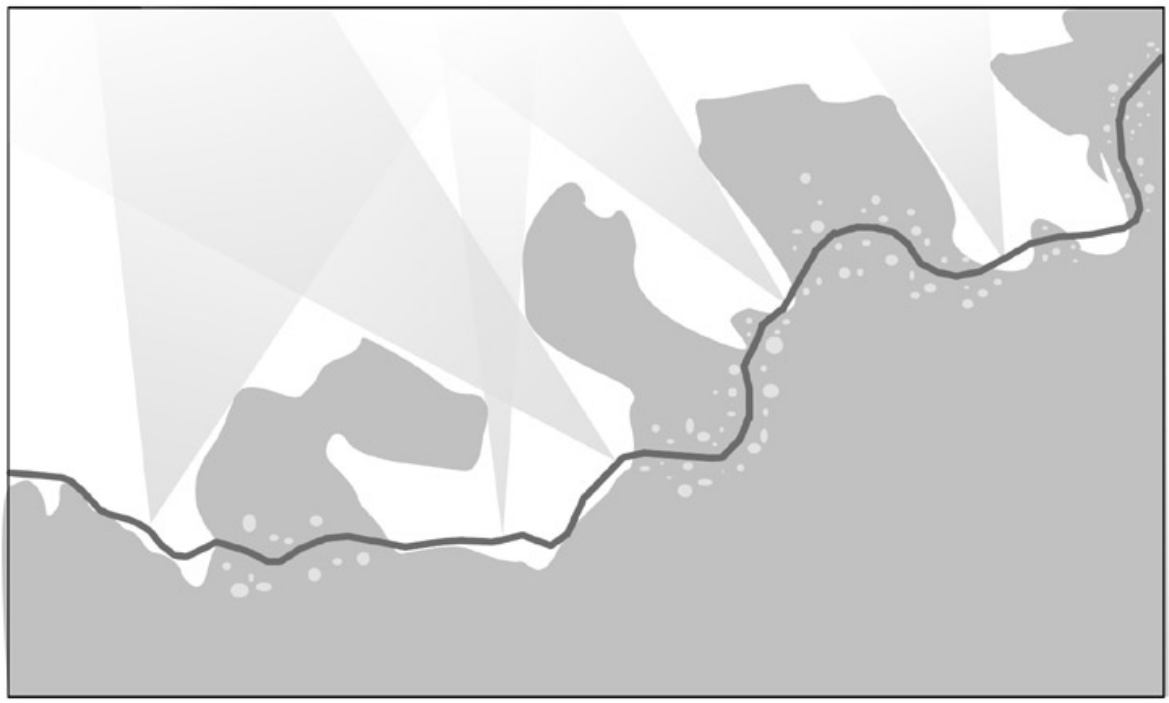


fig. 05.04- Rhythm of edge condition diagram
Source: Author

The design is also a response to the built conditions of the cove and it's various artifacts of vernacular architecture. The project references not a particular style found in the cove, but the way that these structures are placed in the landscape and how these structures touch the earth. The materiality of the design project was also influenced by these vernacular structures with their thin and tailored wooden facades, the resulting lighting quality and the simple solid connection to the land (fig. 05.05 - 05.11).

The goal of the interpretive center would be to provide the visitors with a heightened awareness of these inherent qualities of the Cove's natural and built conditions. This awareness is achieved by the way in which a visitor moves through and experiences the spaces. Specific views are framed and are coupled with the sensory experience along the architectural promenade, thereby affecting a person's experience and understanding of the cove.

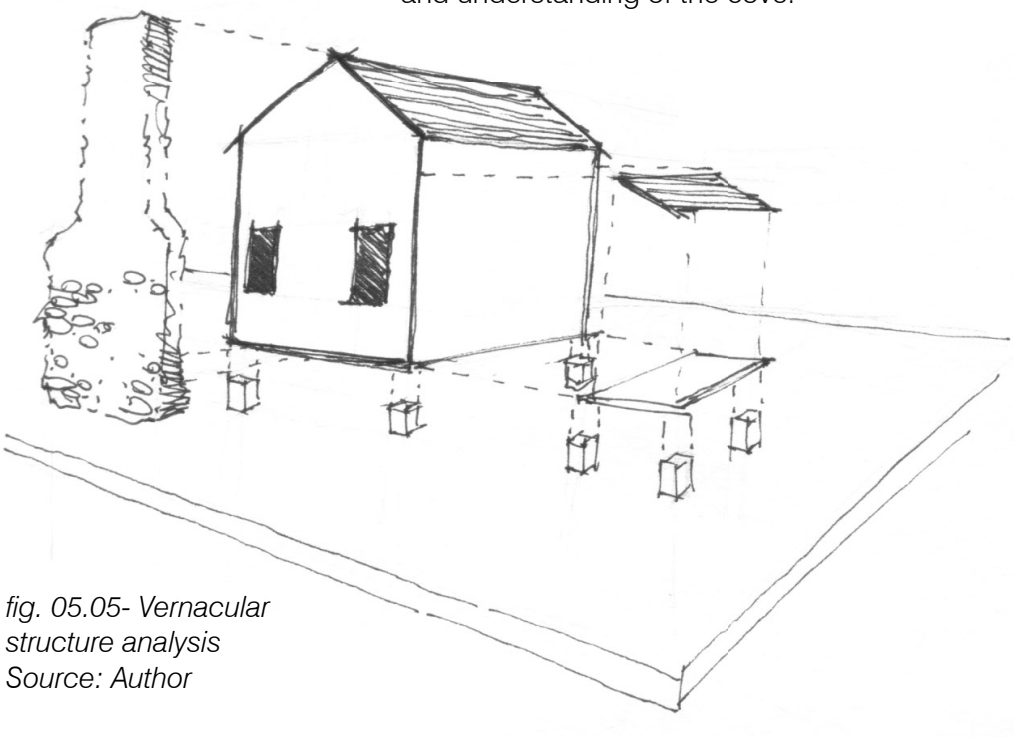


fig. 05.05- Vernacular structure analysis
Source: Author

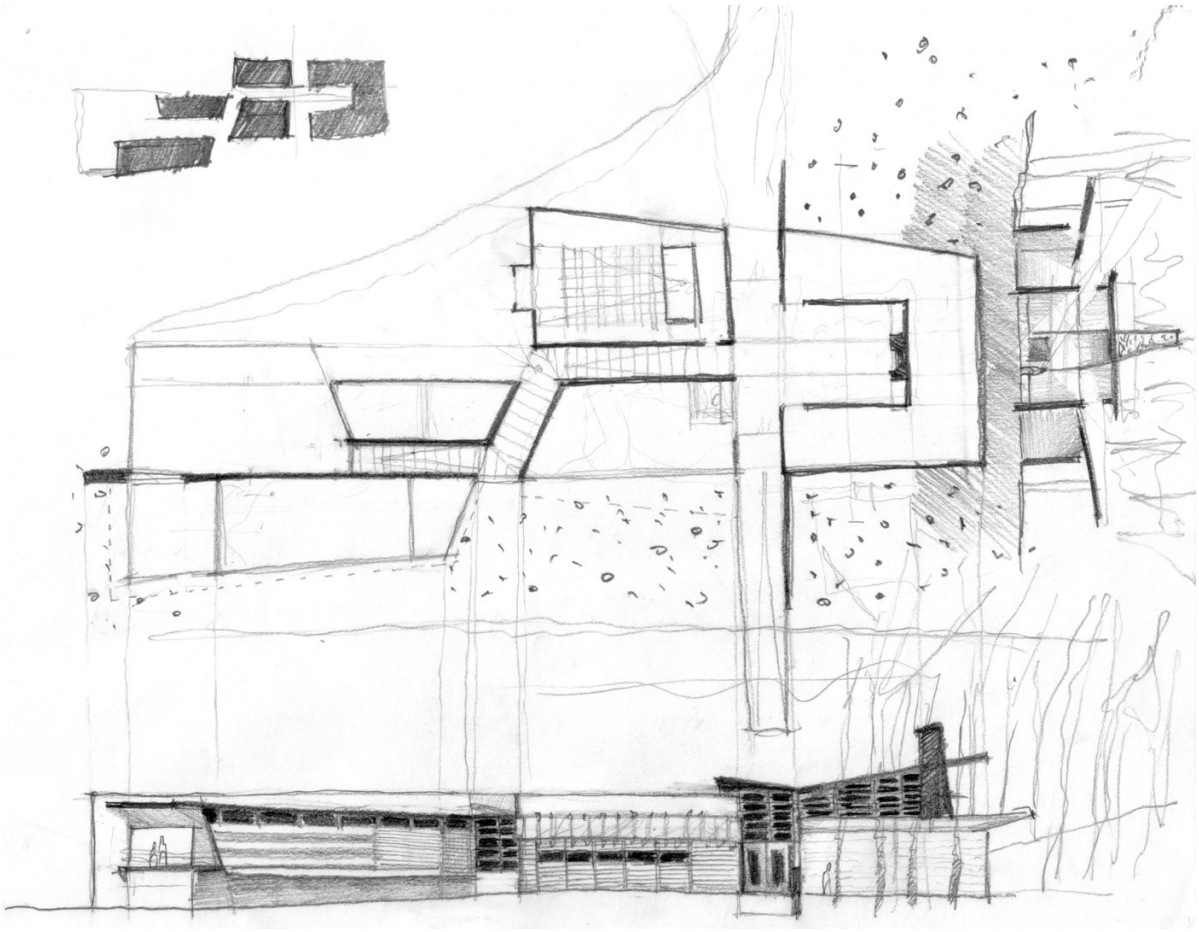


fig. 05.06- Concept sketch
Source: Author

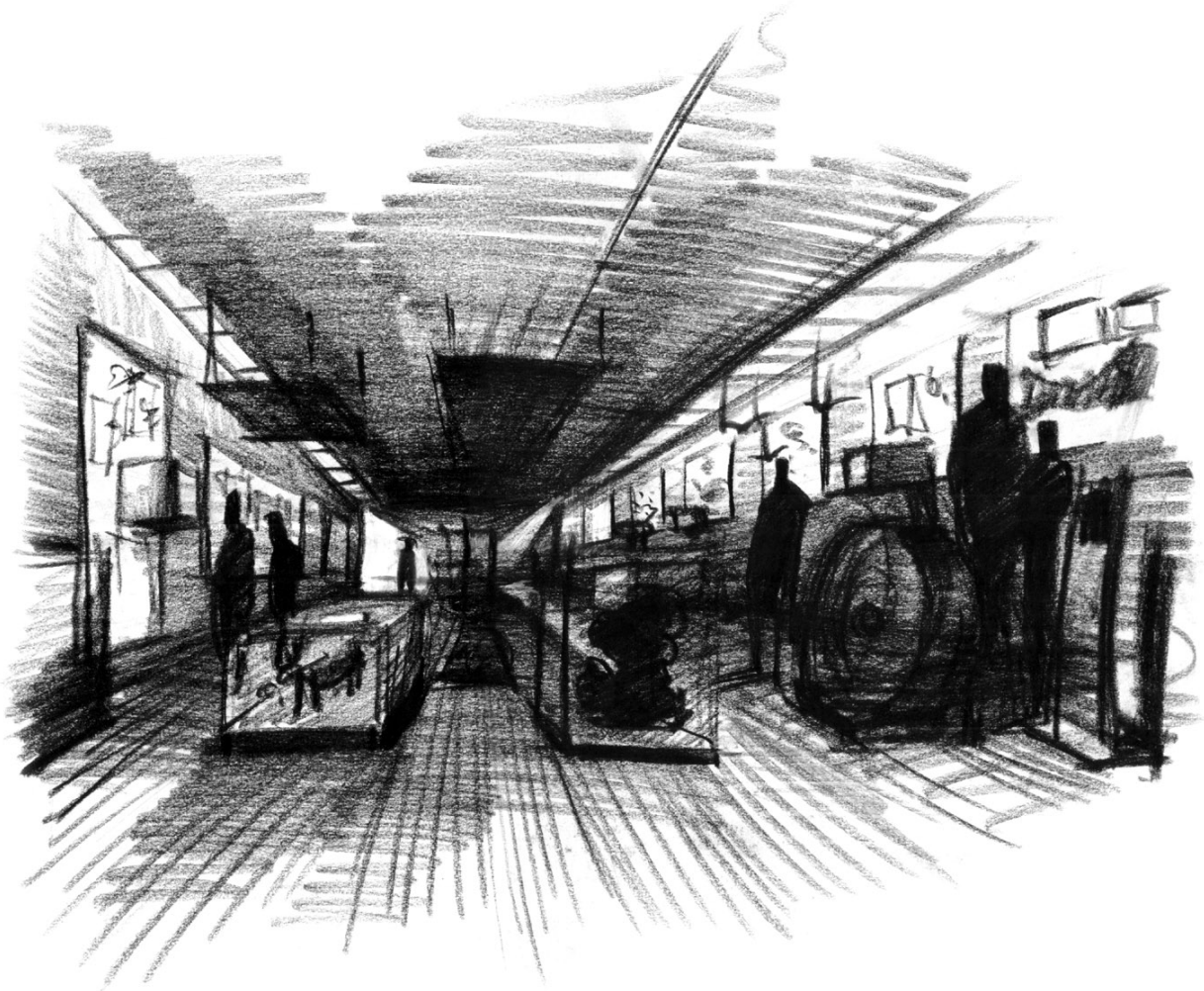


fig. 05.07- Experiential sketch of exhibit space
Source: Author

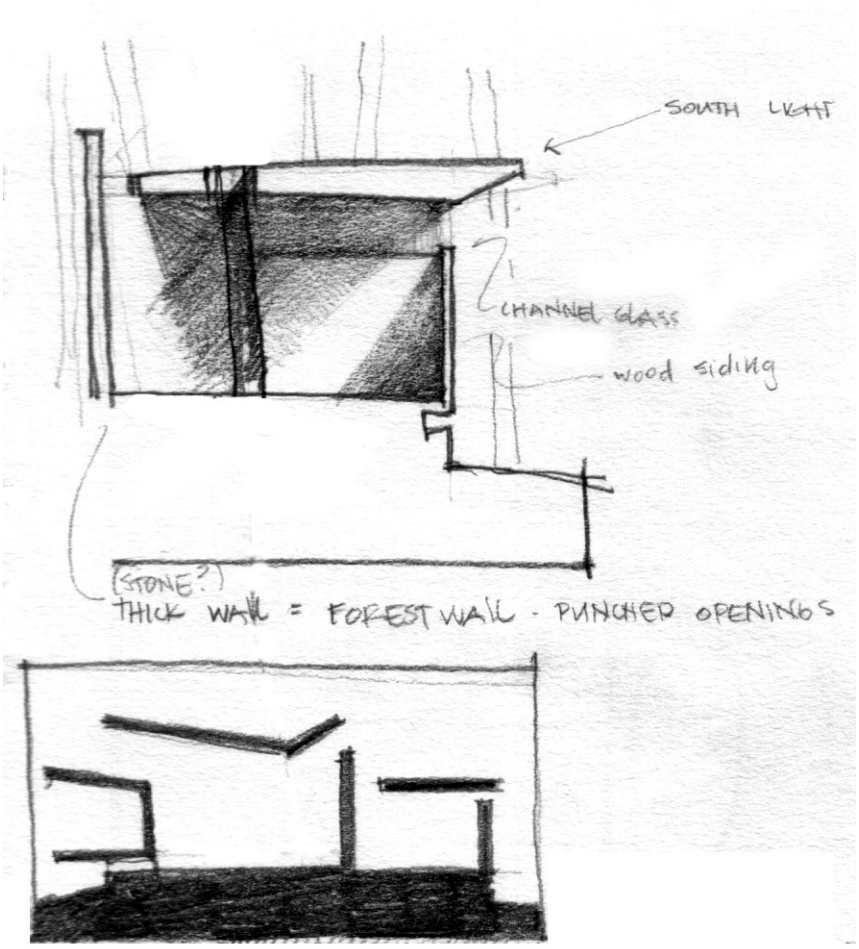


fig. 05.08- Sectional study
Source: Author

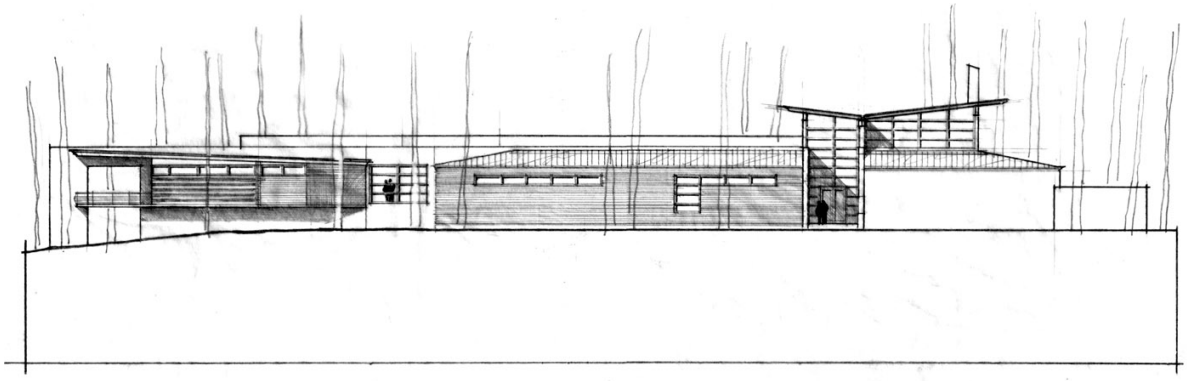


fig. 05.09- Elevation study
Source: Author

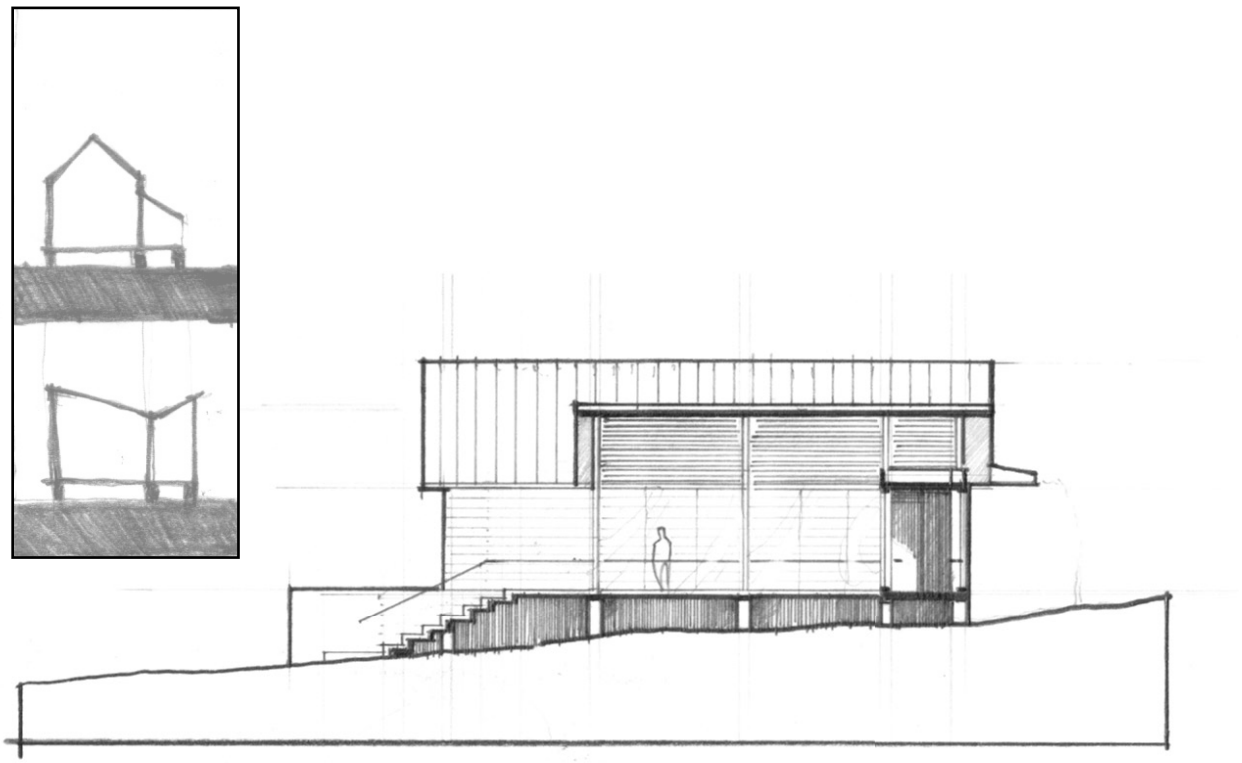


fig. 05.10- Theatre south elevation study
Source: Author

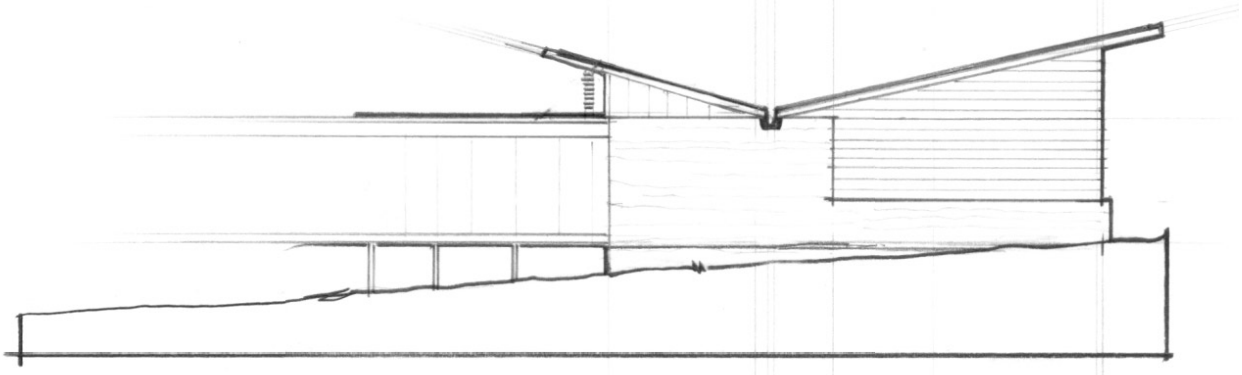


fig. 05.11- Theatre east elevation study
Source: Author

The main mass of the interpretive center is placed at the edge of the forest, incorporating an existing hiking path which circulates through the structure (fig. 05.12, 05.17). The hiking trial intersects the primary corridor of the structure, which in turn follows the edge of the forest. This primary corridor is centered on a free-standing monumental hearth (fig. 05.18). The visitors circulate around the object hearth into the permanent exhibit space. Exiting of the exhibit space one is centered on a thin framed view that reveals a piece of the cove. The visitor then proceeds through the corridor which has a thick concrete wall to the left that serves as an extension of the exhibit space (fig. 05.19). This wall experientially echoes the solidity of the forest wall, while on the other side of the corridor the prospective view to the separated theatre out in the meadow is offered (fig. 05.20). This thick wall of board formed-concrete can be penetrated so that one enters into more inwardly-focused, sheltering spaces which reinforcing and represent the refuge of the forest. The roof system along this section allows light to filter through from above as the canopies of the trees do. At a specific point along the circulation sequence, the floors ramp up and change material from the solid concrete connection to the earth to a floating wooden floor similar to that of built structures in the cove. Once on the wooden surface, the corridor takes a turn back into the thick forest (fig. 05.21). The dogleg redirects the visitor toward the cove where the observation deck offers a 180 degree view of the cove and it's forest edge (fig. 05.22- 05.24).

fig. 05.12- Site plan
Source: Author

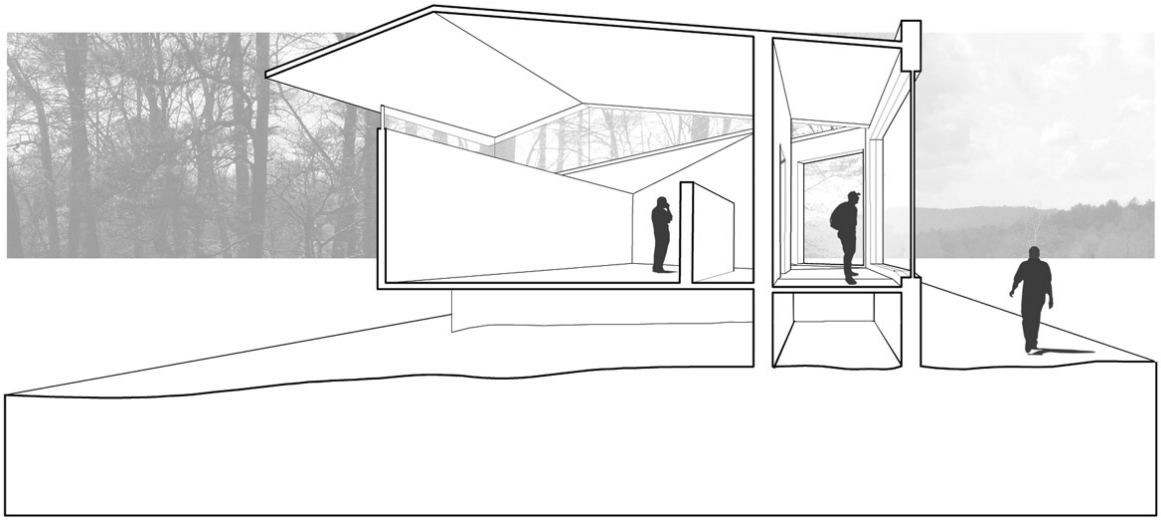


fig. 05.13- Forest-Edge-Meadow diagram
Source: Author

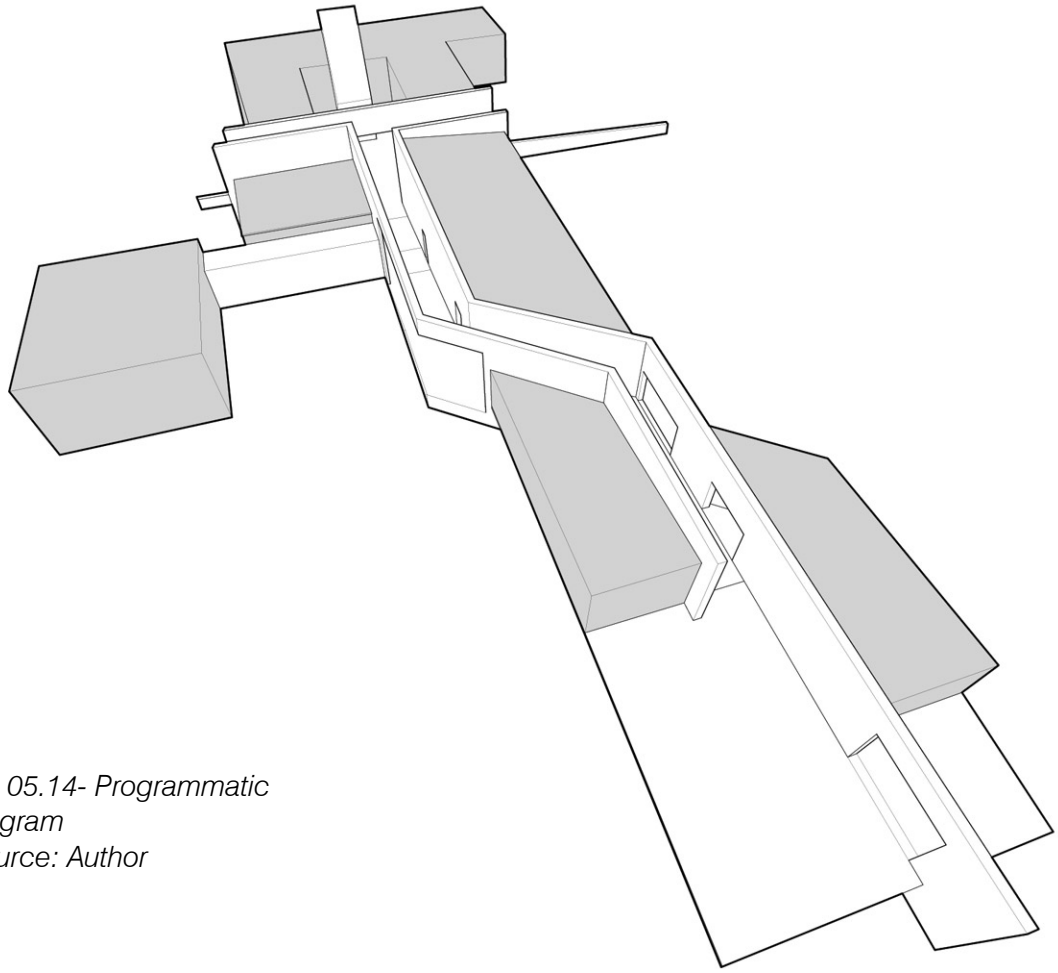
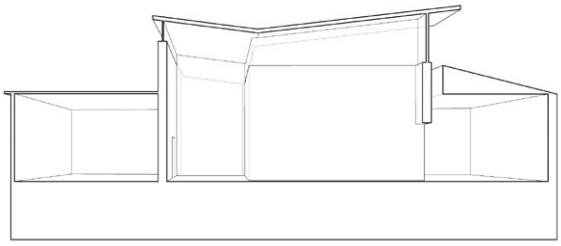
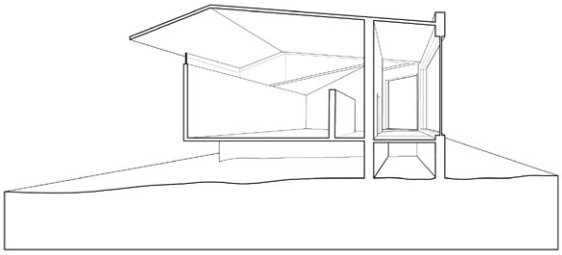


fig. 05.14- Programmatic diagram
Source: Author



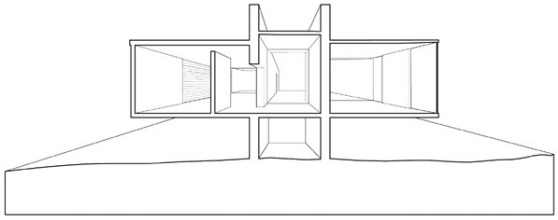


fig. 05.15- Connection to the earth diagrams
Source: Author

fig. 05.16- Approach view
Source: Author

fig. 05.17- Entry
Source: Author

fig. 05.18- View of hearth
Source: Author

fig. 05.19- View down main corridor
Source: Author

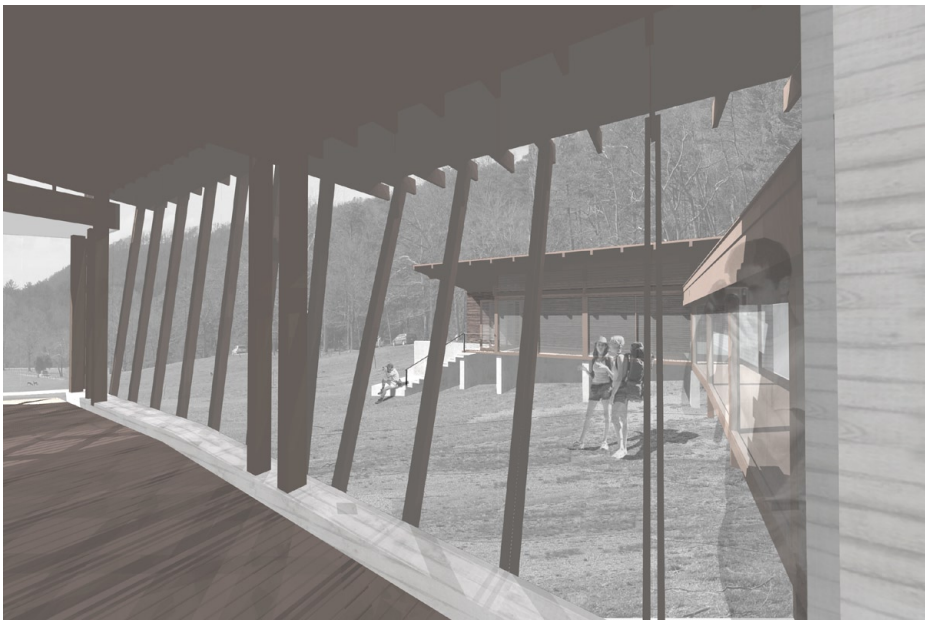


fig. 05.20- View to theatre
Source: Author

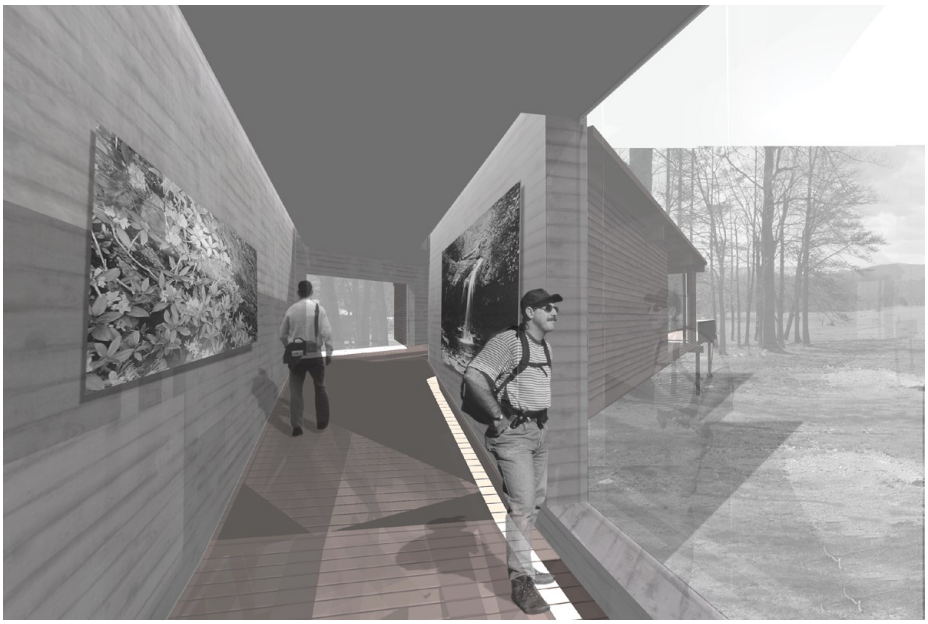


fig. 05.21- View back into forest
Source: Author

fig. 05.22- View into meadow
Source: Author

fig. 05.23- Rear entry
Source: Author

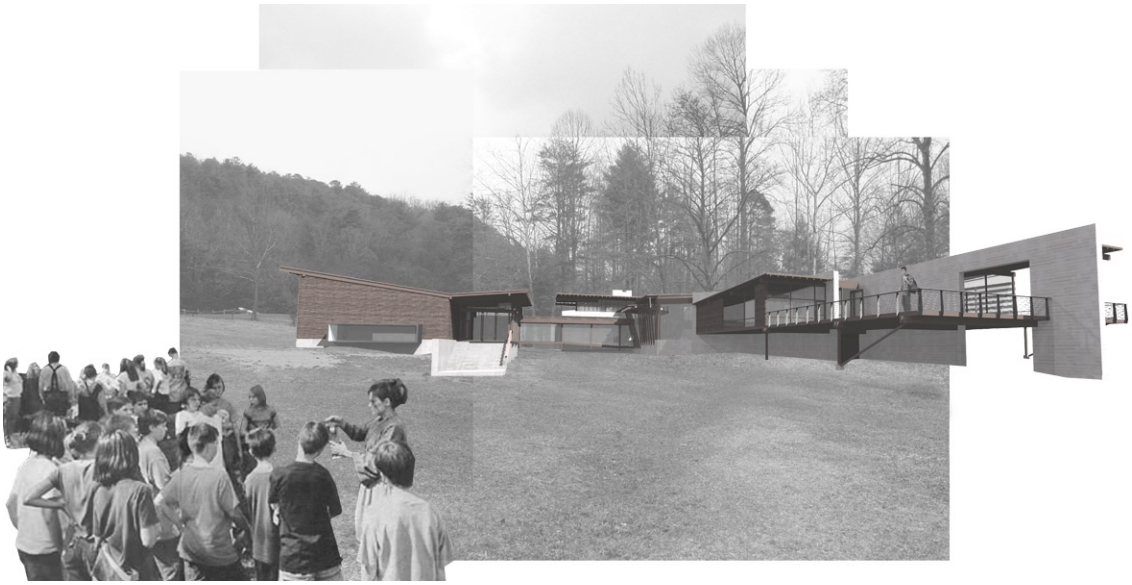


fig. 05.24- View from meadow
Source: Author

Conclusion

One question that has been repeatedly raised throughout this rigorous process is: How can a design be embraced by the general public and not be considered populist, while at the same time, be recognized by the architectural community without becoming elitist? Throughout this thesis investigation, the realization has been made that architecture must strive to attain a stronger connection to the human senses, which will in turn provide a person with a greater appreciation and awareness for his or her built environment.

As a result of this project, a greater appreciation for the expressive and engaging potential of materials and details has emerged and will be continually explored. The knowledge that has been gained through the research and design process will provide a strong foundation that can be used as basis to think critically about future designs.

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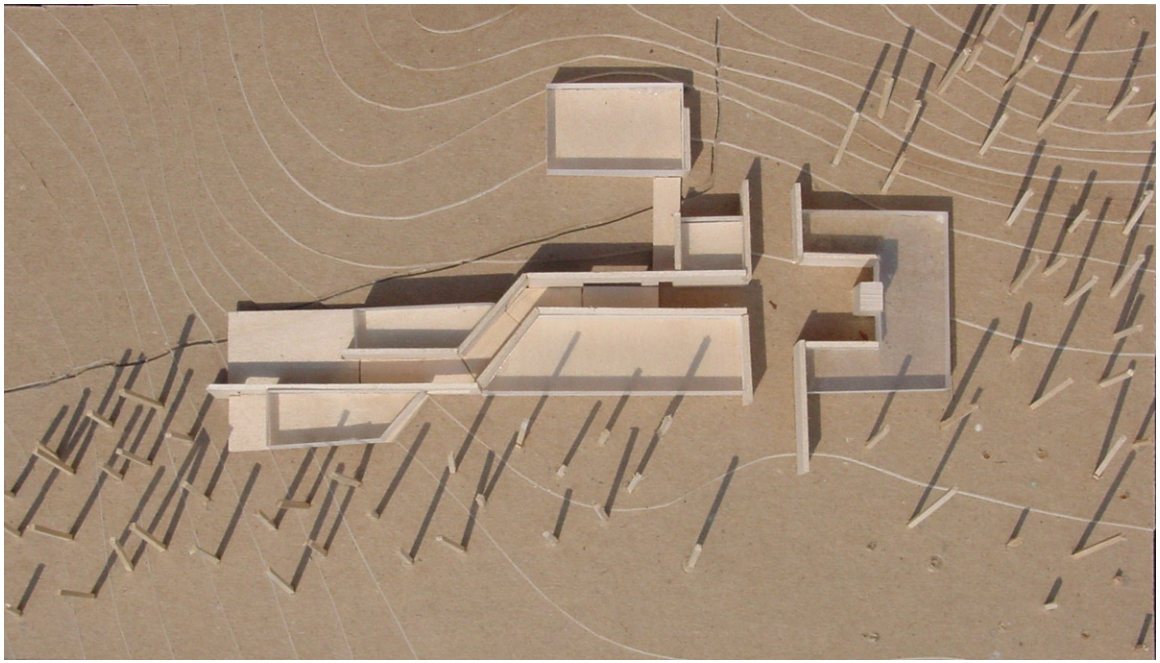

fig. a.01- Programmatic model
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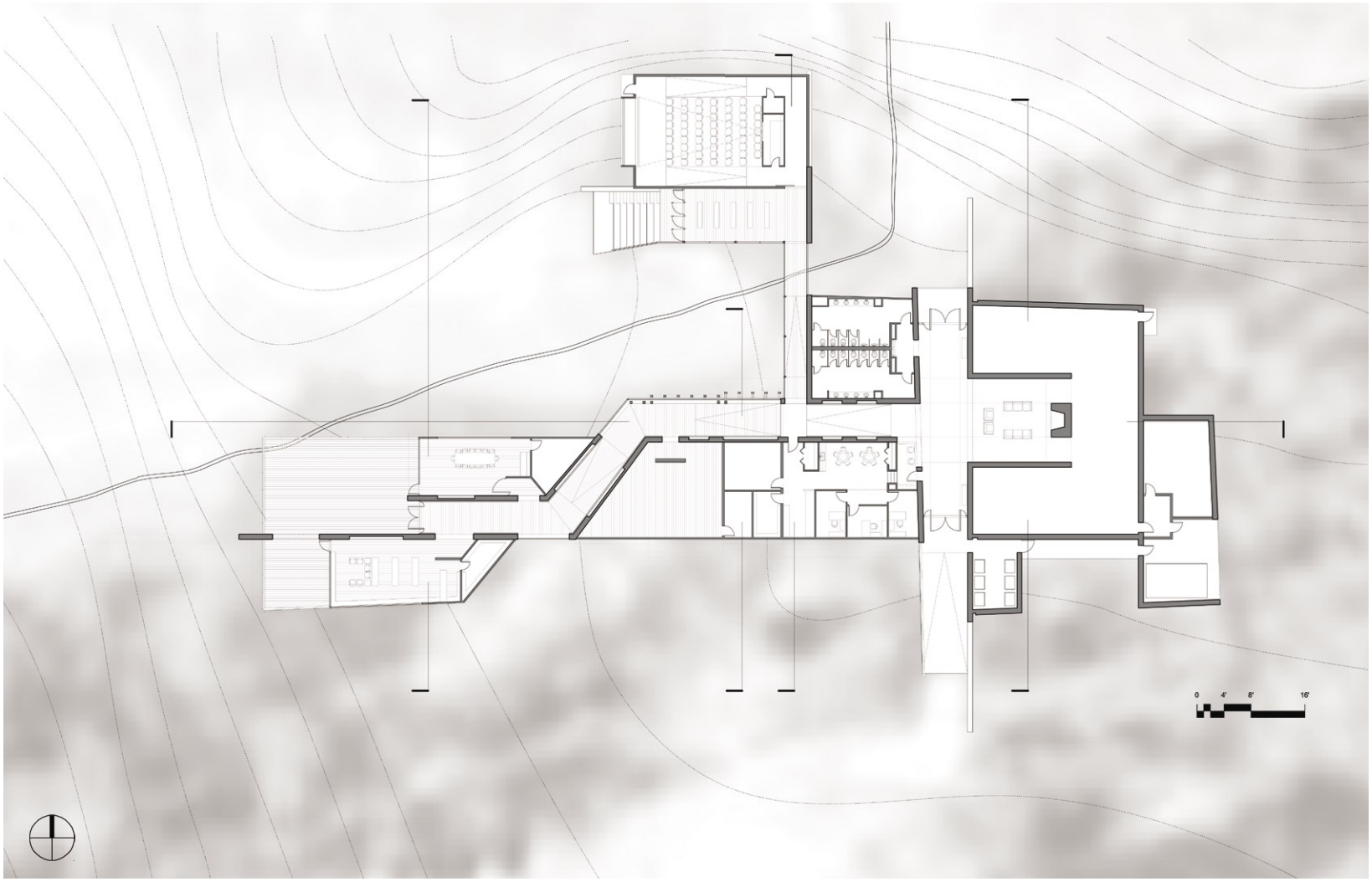

fig. a.02- Floor plan
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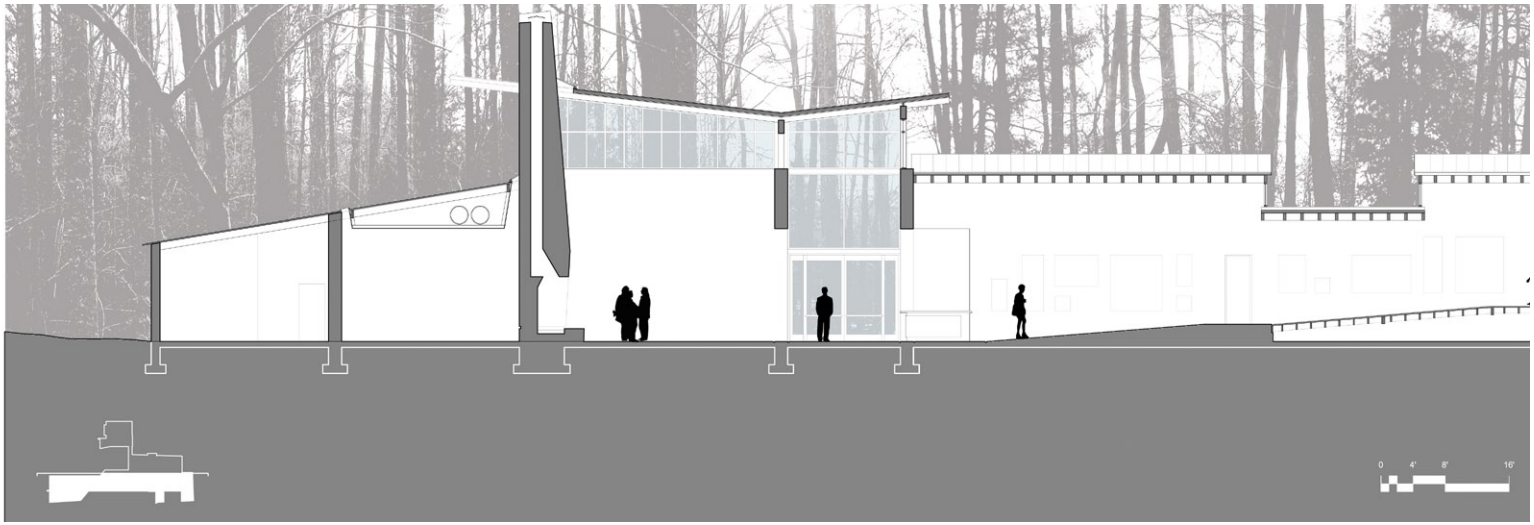

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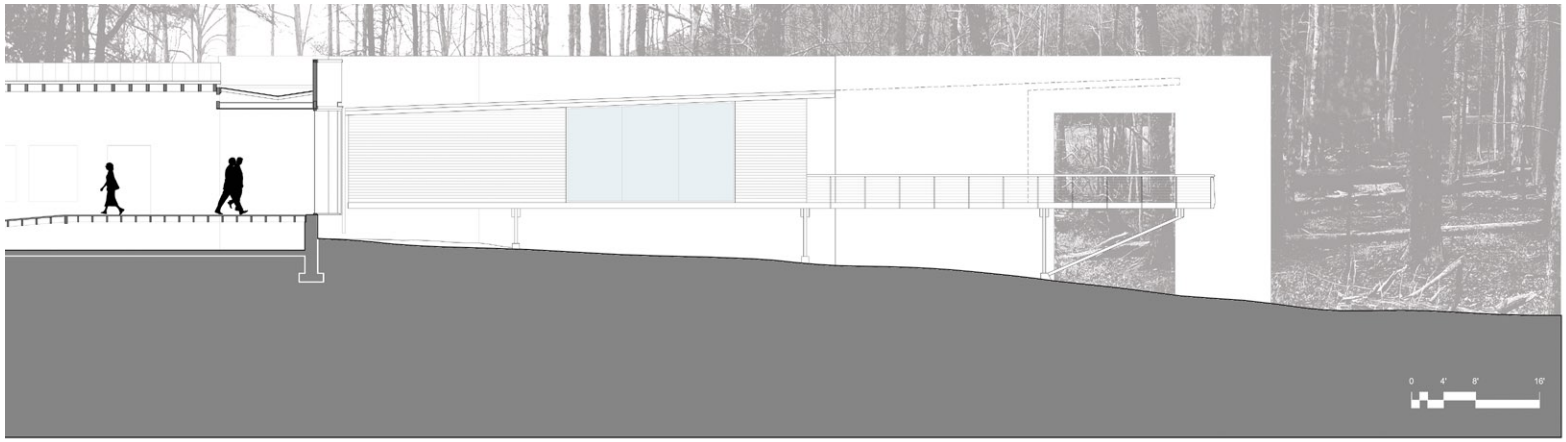

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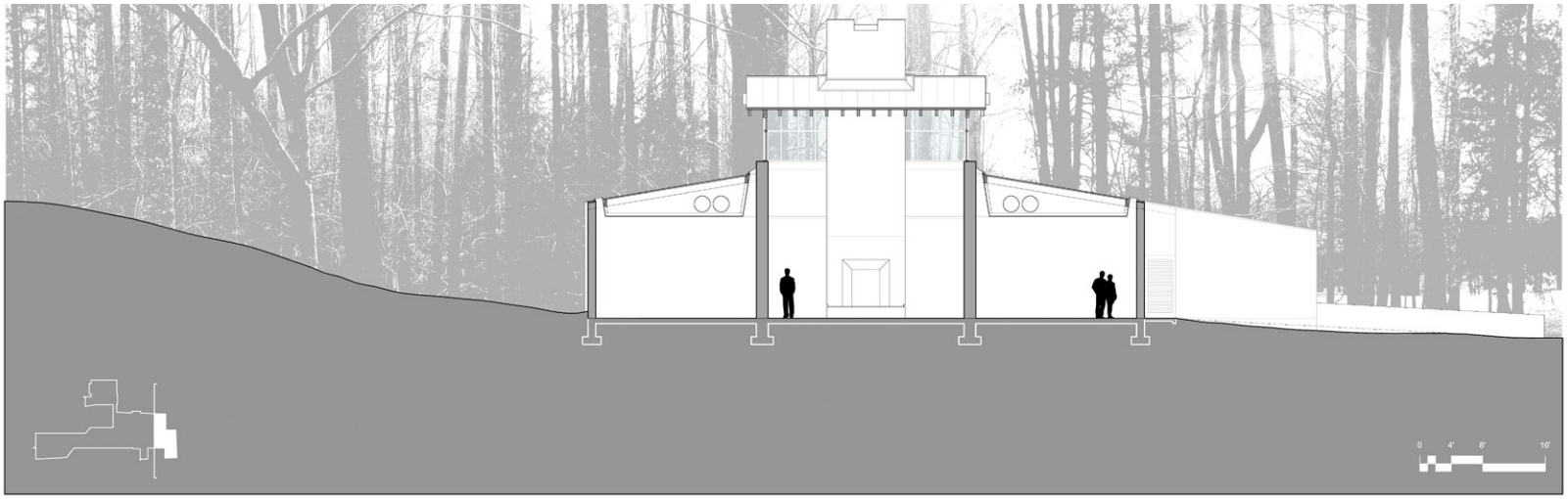

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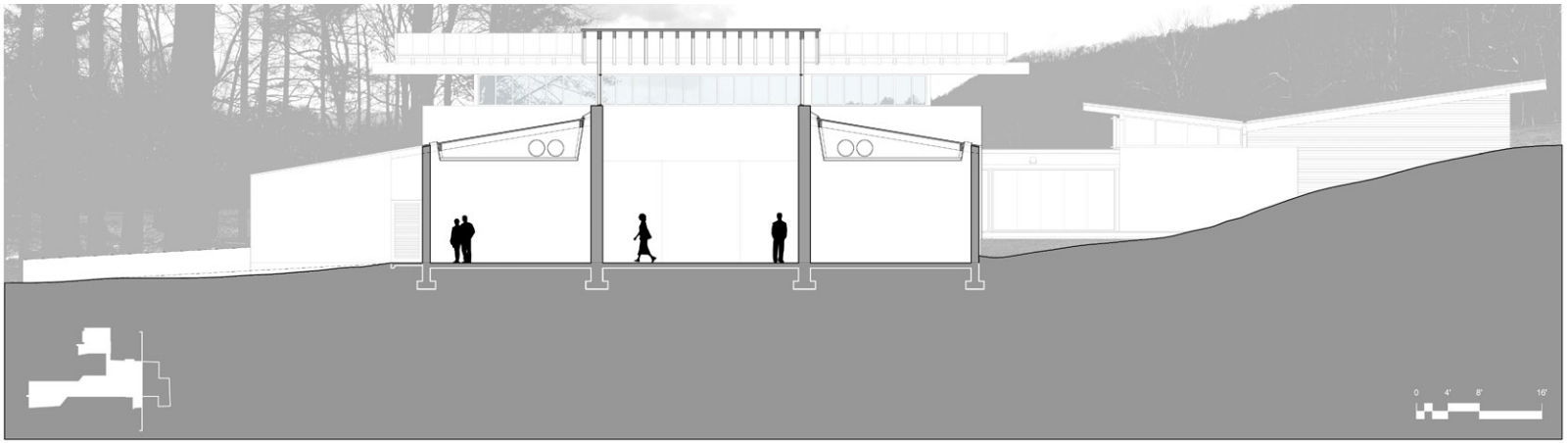

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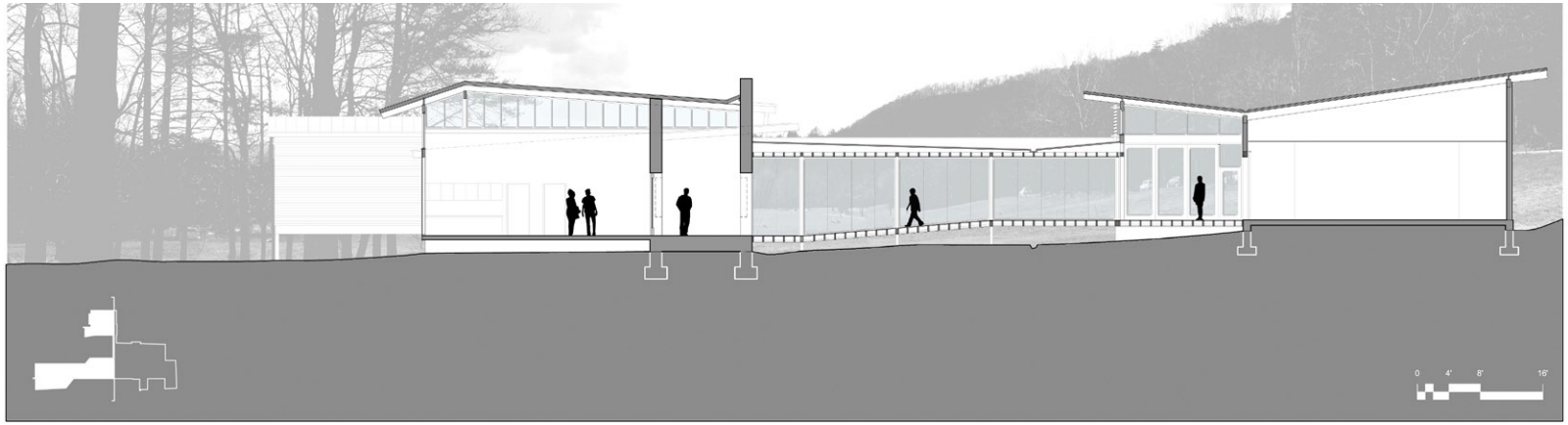

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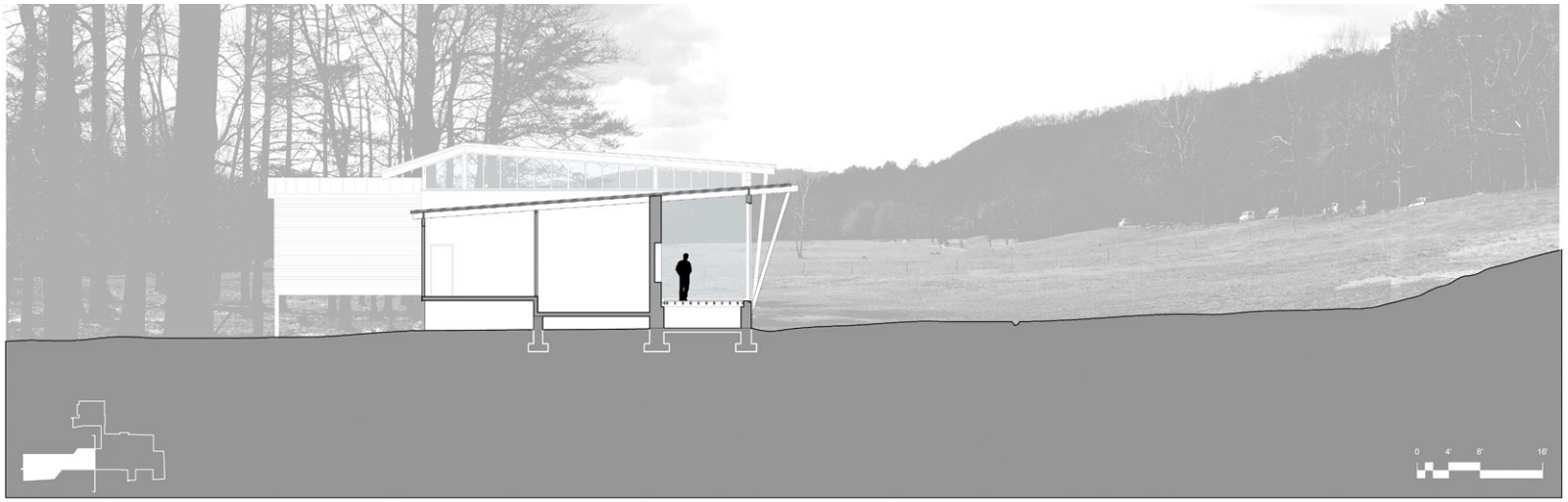

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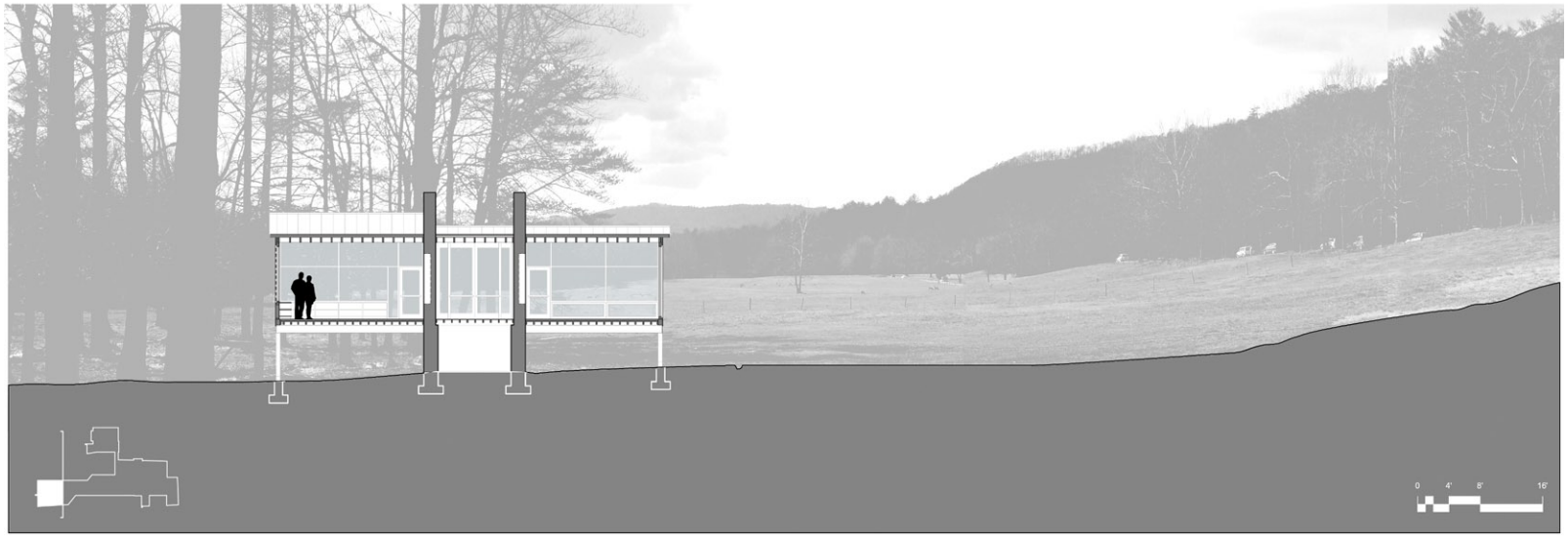

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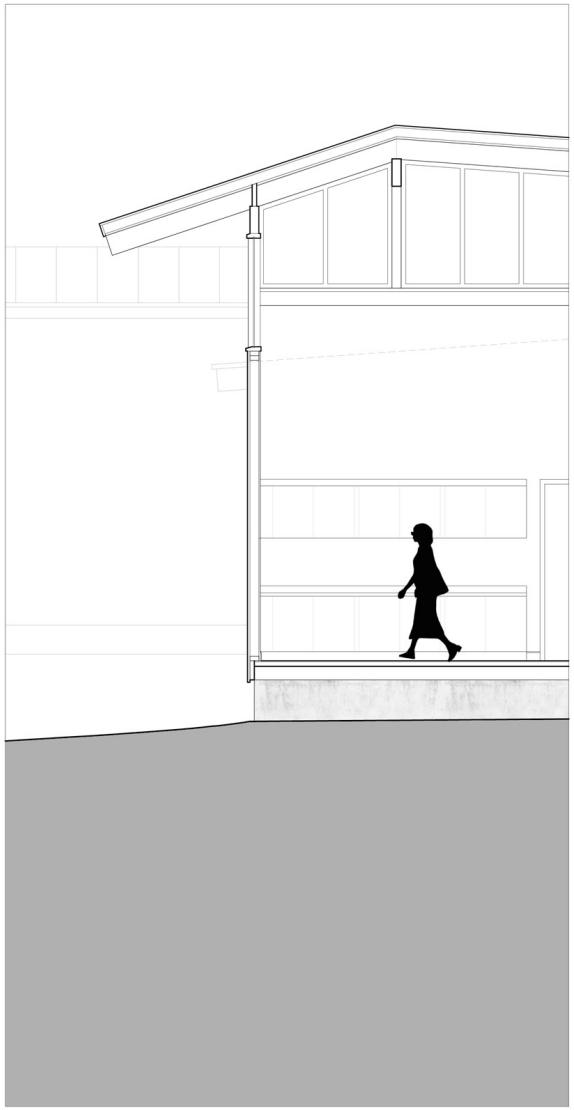

fig. a.10- Forest wall section
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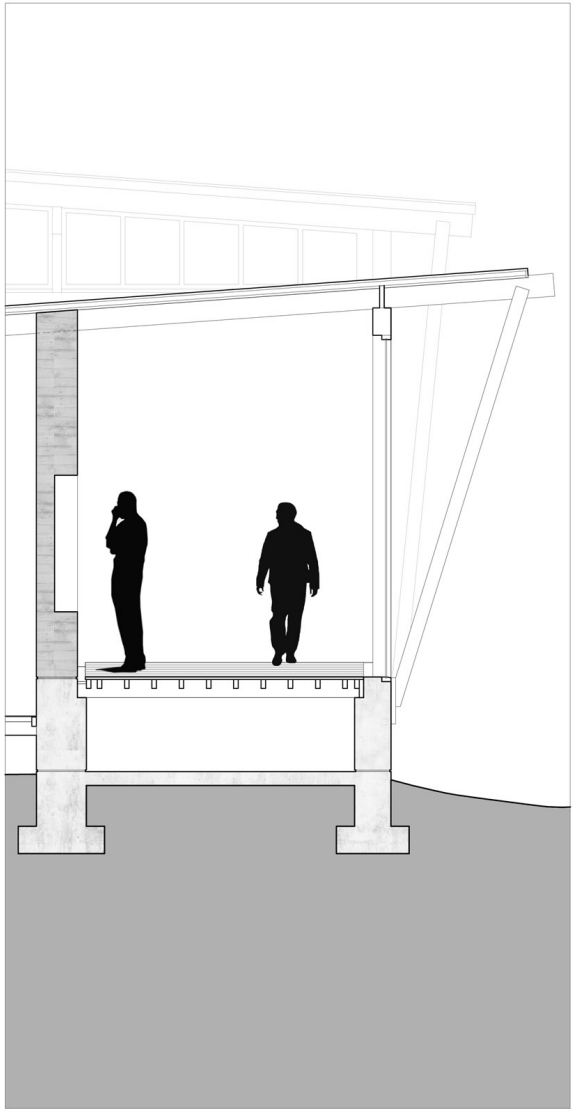

fig. a.11- Meadow wall section
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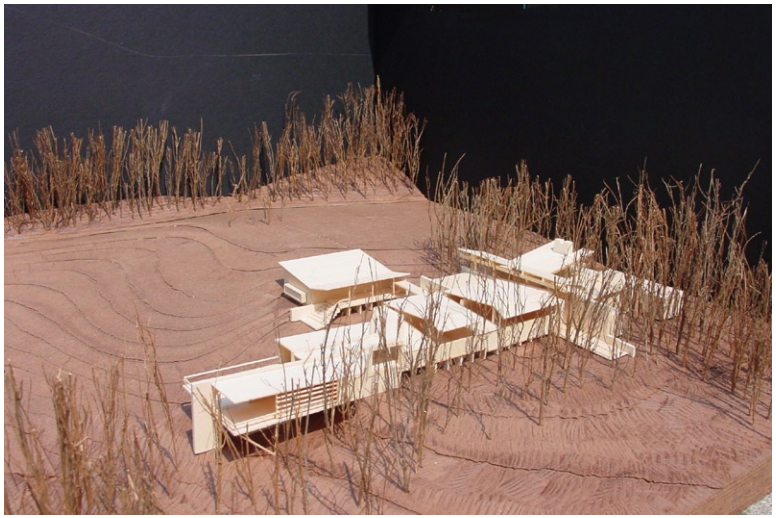

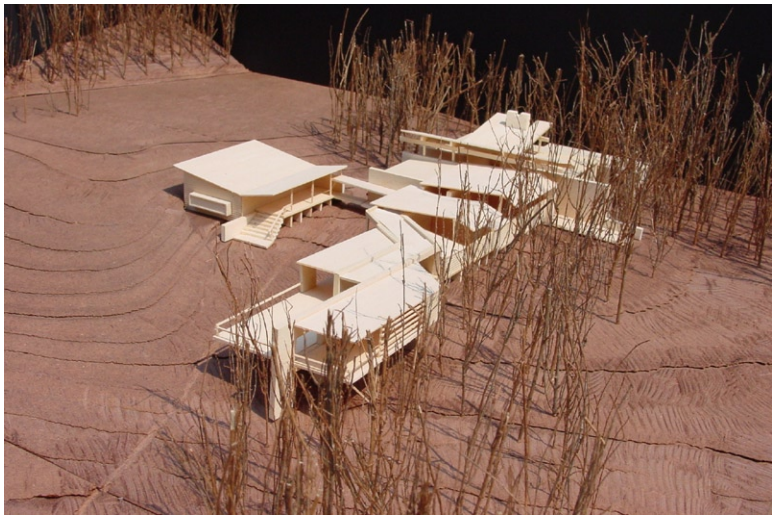

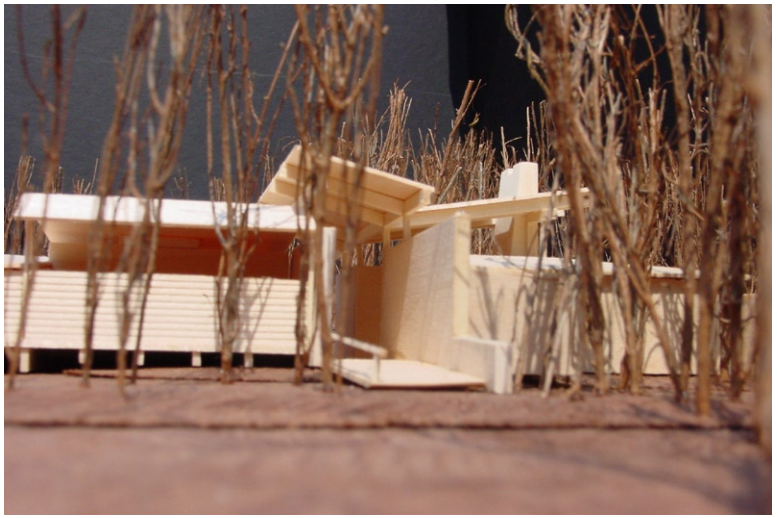

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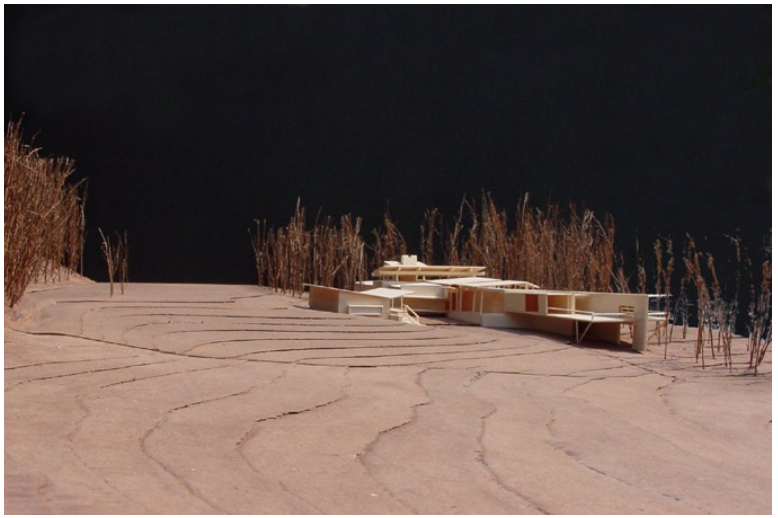

fig. a.13- Model photos 2
Source: Author

Andrew Michael Parks was born in Memphis, Tennessee on October 5, 1978. He graduated from Bartlett High School in May 1996 before attending The University of Memphis in the Fall of 1996. While at the University of Memphis, he received a Bachelor of Science in Engineering Technology and a Bachelor of Fine Arts in Architecture in August 2001. The Fine arts degree allowed him to explore his interest in art, graphic design and architecture while the engineering degree help him develop more technical sills. After getting married and a year of work at a local architecture firm, he decided to apply and was accepted to The University of Tennessee Master of Architecture program for the Fall of 2002. This would be his first professional degree in architecture. While at the University of Tennessee, he had the opportunity to be a graduate assistant for two drawing classes and to work at the campus construction research center. He was also the recipient of the General Shale Scholarship and the AIA School Medal and Certificate of Merit. Upon graduation, he and his wife will return to Memphis, where he has accepted an intern position at archimania in Memphis.