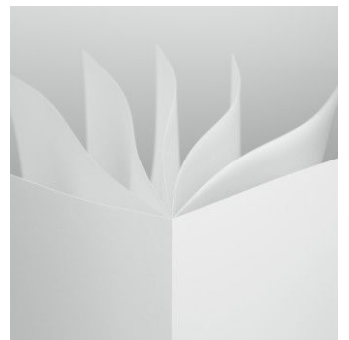


Thermal Spa: Emotional Experience Utilizing
Architectural Poetics



By Laura Johnson

Opening Thoughts...

Lighting design is fundamental to the success of the building. Light is as much a building material as the structure of which it is made, since light, when reflected from a structures edges and surfaces, provides the information upon which we act. The lit effect, the interplay of light and shadow, is a response to functional and emotional needs derived from a unified design approach.

Lighting has been one of the most important modes of expression in the design by the architect. The character of interior spaces can be enhanced by controlling the admission of daylight by means of the form of the building, the size, position and aspect of openings in its fabric.

In order to create excellent light the focus will be on the relationship between natural and artificial lighting and their integration with the building fabric, and surrounding landscape. It is also important to understand the aspects of the natural environment that contribute to the buildings unity including:

The direction of light, which will provide modeling to the interior.

The connection with the exterior beyond, such as a view through the window, an experience of the weather and the world outside.

The natural color associated with daylight, which imparts reality to the interior and the mood created by variation of light.



Introduction

Opening Thoughts...

Complete harmony between body and soul can only be achieved through an architectural philosophy that combines, in a single approach, all the elements of the location in order to produce a better way of focusing on this search for serenity. These décor developments will emphasize the gentle surroundings that have been completely refined so that nothing can disturb the gentleness of this valued location.

“Light enables us to see; it stimulates, informs and excites us. There can be no visual form without light. It conditions both the way we see our world and the way we feel.

Light has many sources. The sun, moon, fire, and electricity all light our world. Different kinds of light cause us to see and respond in different ways. Light is constantly changing-from dawn to dusk, from season to season.

Light reveals shape, surface, and color; it informs our individual perception of the world and provides us with a common language. Light is integral to architecture; it reveals beauty, function and form. It defines the image, color and texture of buildings, cities and landscapes. It determines visual boundaries and our understanding of scale. The built environment is designed not only to provide light, but also to be experienced in light.

Whatever we are doing in our lives, light plays a part. Light is a communication tool; light is energy; light is magic. Light is life. Our world is made of light.” -Anthony Tischhauser



Introduction

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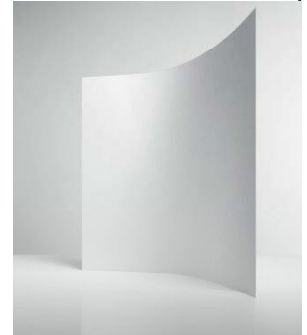


Contents

Excellent Light

The constantly changing nature of daylight makes it one of the elements of architecture that cannot be controlled. This theme comprises the investigation of how to artistically integrate the multiplicities of light and seek to provide excellent light as defined by quality rather than quantity. Analysis of the experiential differences of varying sources and intensity of natural light, how it impacts space, mass, texture, color, assist in lifting the accomplishment of space and structure to levels beyond just programmatic and functional requirements.

Light is a natural connection between seeing and viewing. Natural light allows the opportunity to render architecture to be strong spiritually and inform the atmosphere and the meaning of spaces. The successful transition of light from the exterior to the interior will reflect the architecture. This study will focus on the sensation of living with in a landscape allowing light to flow through the building creating the opportunity for a personal experience. The successful capturing of light will impact and reflect the surrounding landscape elements within the interior of the structure defining space and maintaining a sense of wonder. The design idea will create a passage between the architecture and the site using light as the primary detail.



Abstract



Integration of Light into Architecture

"Good lighting is like music; it gives pleasure and it gives cues, both physical and emotional. It gives a sense of enclosure, direction, and communication. Too much light is like noise; it detracts from the environment and irritates. Too little light is drab, gloomy, and dull, depriving us of color, glitter, and emphasis of highlight and shadow. In poor light, your space is always somber, like an overcast day."

This design thesis aims to ensure a sustainable project incorporating natural and artificial light giving a natural effect to its users and inhabitants. The visitor is meant to feel as if they are outside, suspended in landscape. Inside the visual experience is also akin to that outside: vision is allowed to escape in all directions. Natural light will be the primary source of lighting supplemented by artificial lighting when needed to further emphasize a sense of exterior inside. The focus of this design will strive to implement the usage of light to create calming and relaxing spaces.



Summary/Description

Thermal Spa Resort

A thermal spa designed to challenge the use of light as a primary means of creating intimate spaces, both personal and public

"...light, air and the outdoor view, the sensation of living in the landscape, of having the landscape flow onto or through the room inside – the landscape with all of its lights and shadows." Peter Zumthor



Remarks

Excellent Light

Light is a natural connection between seeing and viewing. Natural light allows the opportunity to render architecture to be strong spiritually and inform the atmosphere and the meaning of spaces. The successful transition of light from the exterior to the interior will reflect the architecture. This study focuses on the sensation of living with in a landscape allowing light to flow through the building creating the opportunity for a personal experience. The successful capturing of light impacts and reflects the surrounding landscape elements within the interior of the structure defining space and maintaining a sense of wonder. The design idea creates a passage between the architecture and the site using light as the primary detail. In buildings today, settings proper to the overt symbolism of light are frequently used to produce dramatic effects. The drama comes by contrast with a relatively dark interior in many calm settings. In some buildings, the drama is often due to the minimized role of sunlight: artificial sources provide a controlled and uniform viewing environment, punctuated by either large expanses of natural light or sharply focused pools of sunlight in entries and circulation spaces.

When designing the built environment the sun is, and always has been, the most important source to consider. The light it emits, which we refer to as natural light, not only allows us to see but it dictates the layout, orientation, form and materiality of buildings and landscapes. "No space, architecturally, is a space unless it has natural light." Louis Kahn.

Design is challenged by the changing light. Man has a desire to interact with the changes in his environment from time to time. The changes from morning to evening which vary further with weather and seasons can be captured in a design. If the actions within a building require the relationship of the outdoors then the connection should be provided. This is part of the human desire for the control of his environment. The experience of the world beyond the building by the views of the outdoors is associated with the factor of orientation. Openings in the building envelope must be strategically placed. The exterior content is not important in itself but the experience of viewing the content. Therefore daylight becomes very crucial in the experience. The experience of the natural tones of color as they change from morning to evening are a part of the experience and emotional satisfaction. The changing color becomes natural to the person.



Thesis Paper

Excellent Light

The Issue

But how do you relate light and the built form? This thesis attempts to understand the qualities of light and how it impacts space and its surroundings. Natural light and artificial light are both needed in order to address the various ways in which light can affect space. It will attempt to understand how light can affect space, form, emotion, and understanding; all part of the built form.



Thesis Paper

Natural Light and Landscape

We have no direct control of natural daylight; its movement, direction and position. The quantity, quality, and color are all season, time of day and climate. Our response to the sun is functional. The built form should not only receive the light but emit it. There is a need to challenge the interaction of daylight with the surrounding elements to enhance the buildings design. The structure and the lines of the building frame the landscape: the sky, mountains, and water. The lighting design must offer an example of how architecture and landscape can coexist in a sustainable matter. The natural surrounding elements should be brought into the built environment. The trees and landscape that surround the building articulate the role of shadows that play on the building. The movement of shadows carries with it the movement of place. As a result, places are created which have been marked by the movement of shadows in time. Light affects the natural appearance of a space, where the overall experience, the objects and surfaces are modeled in daylight with the addition of sunlight at certain times of the day. "When you're in the space, thoughts of how time moves is enhanced due to the way the artificial, and natural, light moves within the building." Different sorts of effects can be generated through a combination of direct and indirect light. Sunlight and water become key elements in the success of the building. One of the characteristics of the natural world is its variety and variability, and the opportunity and the need to make adaptive responses. How does the natural light relate to the landscape? By incorporating water and light into the building, the awareness of the natural components of the physical environment is stimulated. The unique landscape with a river parting the design creates an impression of fluidity and aridity complimented by the surrounding vegetation. The water that flows through the site reflects of light creating images. During the day the sunlight is reflected and at night the moon is reflected creating a light source. The building is situated on the site to take full advantage of the features.

Similar design techniques have been accomplished in The Commune by the Great Wall Kempinski which has become a showcase for contemporary Chinese and Asian architecture. The setting indulges the landscape with each house framing dramatic views of the landscape and the Great Wall. The Anantara Spa situated in the resort blends with the mountains to provide a sanctuary of privacy and tranquility. In one of the resort homes, daylight is introduced through large glass windows where light is modified and controlled creating shadows on the interior.



Thesis Paper

Excellent Light

Artificial Light

Artificial light must be looked at as integral part of the design system rather than a functional system. There is a need to control this light and create a visual comfort with in the space. Natural light allows for someone to create the atmosphere in which they desire. With the use of natural light, the buildings are able to glow after dark, attracting visitors. It becomes important to not only look at the interior light but to concentrate on the interrelationship between the exterior and interior light.

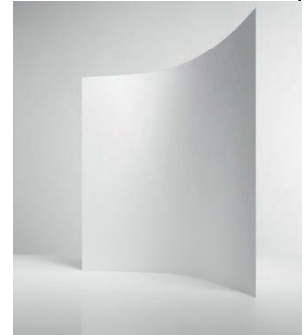


Thesis Paper

Thermal Spa

The building design proposal is a Thermal Spa Resort reflecting the surrounding context. The spa challenges the uses natural light and water as its primary design focus. Water, light, and color are the key elements in spa design. There is an inter-relationship among all these elements. They are serene, comforting, clean, and fresh; they take you out of the material world into the spiritual space that is free-flowing and translucent. It is more than merely a functional center but challenge to create an innovative building that generates an environment for physical relaxation. The simple relationship between the function of bathing in a natural environment and light is expressed by illumination of the water. A space is illuminated by the reflection of light bouncing off the water and surfaces contained in the space. The ambiance of the space is a result of the lighting. The surrounding views associated with light are important in enhancing the visitors experience at the spa. The Bath Spa in Bath, UK, demonstrates a variety of lighting effects to define the space. The light largely emanates from the water. The brightness of surfaces and amount of reflected light was carefully controlled to generate subtle effects and minimize light spill. The baths themselves use fiber optics, and uplighting. For a long time now, health spas have not been alone in dedicating themselves to human well-being. 'Wellness' has become a mass phenomenon and an integral part of the leisure industry. For example, where once people sought relief in therapeutic mud baths, spas have now been opened to provide a variety of health and relaxation services with the aid of lofty architecture, light, warmth and water.

Therapeutic jargon, of course, makes subtle distinctions: the ailing receive treatments, while in the beauty and wellness world we speak of applications, there is a reluctance to stigmatize the need for such things. When Peter Zumthor built the thermal baths in Vals/ Switzerland, he created a yardstick that all kinds of spa architecture, especially in and around the Alps, had to be compared with. However, Zumthor's cryptic style, ritually internalizing the mountain backdrop, is hard to retreat from once entered; especially as in Vals there is no need to get into the water and tolerate every square meter as a spa experience. By reducing buildings to simple or familiar forms, and covering them in a single material, the architectural interest could be focused almost entirely on surface qualities and the play of light. Vertically or horizontally sheets of quartz as in Peter Zumthor's thermal vals that appeared closed by day could glow mysteriously at night.



Thesis Paper

Excellent Light

The succession of space is guided by light and temperature. Narrow slots and openings in the ceiling allow natural light in creating a connection to the outdoors. On the outside, large openings on the façade link the outdoor pool to the surrounding landscape, while smaller apertures bring light to the small spaces of the ground floor. The effect of light upon the materials stimulates the experience in the space.

The spa: the idea is that guests should feel as though they are in a conservatory within which the spa, although they have their personal place, are not intended to dominate. The landscape, moreover, underpins the interweaving of interior and exterior that is a central feature of this light-drenched spa concept. Daylight spills into the entire large spaces from the sides, but the personal spaces are skillfully designed to be generously provided with natural light: where a broad strip or opening within the roof or wall surrounding the spa is glazed to allow ample daylight to penetrate all the way to the ground. Daylight accompanies the visitor through the entire complex and makes a significant contribution to its pleasant atmosphere.



Thesis Paper

The Emotional Connection

“The purpose of architecture is to move us.

Architectural emotion exists when the work rings within us in tune with a universe whose laws we obey, Recognize and respect.” –Le Corbusier

The intimacy of an architectural experience relies on the ability of the architecture to address the mind and body as one. As concern fades from the qualities of a space to an emotional and empathetic involvement, the individual has the capability to achieve a more Fulfilling experience.

What then is the relationship between the theories of emotion, the study of experience and design? This concepts can be understood through first, the perception of the individual participant as it elicits personal sensations and evokes meaningful experiences. Second, the perception of the individual as it provides ideas which direct bodily activity and therefore feelings. Third, the approach to a design based on lived experience as interpreted though behavior, experience and meaning. It is the synthesis of these assertions providing, that this thesis aims to demonstrate the framework for an emotional experience of architecture. The thesis will explore these assertions in the context of the body, emotion and architecture. The interpretations of emotional relationships within a designer’s own experience and the study of other’s emotional experiences, is necessary in the understanding of architectural experience. It is the realization of personal experience as a designer and then the implementation and translation of such mental images that aids the framework of an emotional experience of architecture. It is the designer who has the capability to explore their personal images, their unique motivations, and the capability to recapture the essence of a distant moment. As explored by Zumthor, the experience of the designer is invaluable when pursuing the line between quality of space and empathetic involvement. Peter Zumthor states, “The roots of architectural understanding lie in our architectural experience: our room, our house, our street, our village, our town, our landscape- we experience them all early on, unconsciously, and we subsequently compare them with the countryside, towns and houses that we experience later on.” It is these roots that we have to become consciously aware of as designers. We question how and why these experiences made an impression on us. What these characteristics were like, how they felt, how they sounded.



Thesis Paper

Light and Shadow

Light and shadow become an important contrast in design. The natural sunlight creates shadows and patterns that define that space at different times of the day. Architect Rand Elliot believes, "Rooms should have light and dark spaces for a rich experience. Without the contrast, a room will lack drama and become too monochromatic. Shadow informs us of direction and the movement of the light. Shadow can cool and protect, moderating climate and relieving glare. The question is how do we work with it? In the natural world we have no control of the sun creating shadows but with artificial light, there is freedom of how it is used to create shadows. Shadows have other vital properties such as texture, and color, that when combined with focus, position, direction, and movement provide as many remarkable opportunities to add variety, richness and expression as light itself. By studying the quality of natural light we are able to learn more about the way in which both mood and drama can be created with light and shadow.

Water as a design element in the building is crucial. Water's importance is not as a substance but as a symbol and expression of ambiance. Even the quantity of water present is unimportant. One is supposed to be able to enjoy the tranquility of the water. Light can be reflected from the surface of water, from within water and from the bottom surface. The light we see is the combination of each of these. When a building is reflected on the water's surface the image may be changed or identifiable. These reflections may therefore be seen as the extension of the built form.

Shadows from the trees and land features eclipse the materiality of architecture. A multitude of shifting shadows in and around the building embraces the richness of shadows and the infinite nature of darkness in certain areas. Light and shadow imply the passage of time, induce human activities, and deconstruct and construct space. The building becomes the medium of light and shadow, reflecting the sunlight that enters through the glass walls and enabling the viewer to see the changing color of light, as the day goes by. At night, the artificial light creates shadows and plays with the reflectance of the building on the water.



Thesis Paper

Excellent Light

Conclusion

This spa design attempts to demonstrate how light defines space. Light influences the space in which it defines mass. Lighting can reveal texture, color, and shape. The relationship between light and space helps us to perceive what is around us. The lighting can make a space feel warm or cool. It can make it feel open or closed. It can give the sense of intimacy, boundary, and scale. Light has the ability to alter the scale of form and space. People have a primal connection to it. The challenge is to design a space where the light inhabits a space allowing you to feel it physically. Light connects to the views around a person. The surrounding landscape features become important visual and physical objects. Designing with light gives the designer the ability to create a visual boundary with light guiding a person through a building, and from the interior to the exterior. By understanding how light may be perceived, the building will be clearly understood.



Thesis Paper

Excellent Light

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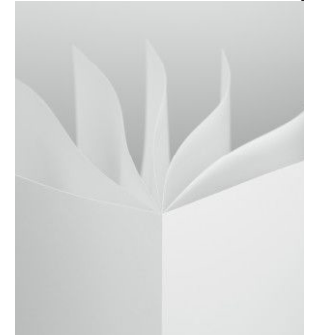


Bibliography

Precedent Studies



Qiora Store and Spa: Located on New York's Madison Avenue



Precedent Study

"The building functions as a lantern for the surrounding streets as its interior lights up at night"

The lighting simulates daylight, modulating between warm and cool shades to make the skin glow; at night it adds to the sense of mystery on the interior

It focuses on the personal rewards of engaging physically and psychically with the space from outdoors to indoors

Qiora Store and Spa: Located on New York's Madison Avenue

Analysis:

The goal of the design was to create a sensual environment with lighting and materials to disengage the guests from the fast pace on the avenue. From the street, the spa appears as a stage set seen through a composition of windows and glass. Inside unique materials like Organza stretch from the floor to ceiling creating private spaces for treatment. The remarkable lighting simulates daylight, modulating between warm and cool shades.

The Qiora Store and Spa on Madison Avenue was designed, by Architecture Research Office (ARO). This store was design to sell Shiseido skin care products and a calming in the most seductive manner possible. Shiseido is Japanese, and in their design of the store, the architects expressed their creativity of materials and light through clear simple forms and blurring boundaries that are created by the continual play between translucent and opaque, and between light and shadow.

Materials:

Apart from the service rooms ranged down the south wall at the back, everything is curved to make space flow within the lofty wedge-shaped interior. The usage of materials varies to create different forms. The curved forms resemble the of the curves of the human body. Three circular rooms divided by hanging organza wedge mark an informal division between the retail zone at the front and spa at the back. Vertical hard surfaces are obscured by diaphanous veils of stretched organza and are used throughout the interior to form delicate colages of light and color. In the retail zone, the fabric defines consultation areas and reception; within the spa, it shrouds the cabins and more intimate places for relaxation. Inside each cabin, opaque walls are lined with soft suede-like material.

Light:

Lighting has been considered an intrinsic part of design, as substantial an element as the materials. Dimmed and fabric-diffused fluorescence around the interior's perimeter are concealed so no fixtures distract the eye, and luminance, creating a radiant glow on the skin, induces the sensation of daylight. The guest becomes distracted by the natural and relaxing feel of daylight and forgets the chaos on the street. Elegant little bottles and jars containing lotions and potions are displayed on glass shelves, their minutely distorted forms suspended in light. During the day, the fiber optic fittings emit changing shades of white. After dark, lighting and fabric become stained with blue.

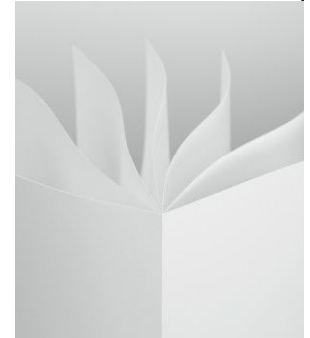
Critique:

This spa is unlike what I would like to achieve because of the urban setting that it is in. This building is located on New York's Madison Avenue where there are limited views. The lighting design is focused on the interior more then the exterior.



Precedent Study

Lumier Salon: Located in Providence, Rhode Island



Precedent Study

The mirror wall, seen here looking toward the back of the salon, is etched to allow rays of light from behind to project through

The window detail of hanging copper rods frames the dramatically luminous interior in an abstract light composition

Lumier Salon: Located in Providence, Rhode Island

Analysis:

The lumier salon located in Providence, Rhode Island is also set in an urban setting while maintaining a mythical appeal, inspiring wonder as it glows. Copper rods hang from the ceiling creating a screen from people who pass by, but still allowing daylight to enter. At night the scenarios reverse and the beautiful lit interior becomes a spectacle for the city. Unique details of light include a mirror wall toward the back of the salon that is etched to allow rays of light to project through, and also the abundance of reflected surfaces that intensifies the salons lighting scheme.

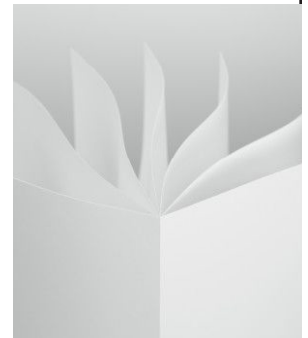
Architecture firm Hogan/Macaulay was challenged to create a lighting scheme that would express the identity of its new business in a district that is rapidly transforming from industrial to "hip". The Providence-based interior design team Studio 360, assisted in the lighting design.

Viewed from the street, this 17-foot-high space on a corner lot emits a brilliant, amber glow that boldly sets it apart from the industrial gray of the surrounding buildings. The focal point of the design is a hanging veil of thin copper rods that span the full length of the floor-to-ceiling glass storefront bordering the salon on two sides. Light emitted by low-voltage xenon lamps from above is aimed at the rods in such a way that the glow takes on a copper hue, and the visual effect shifts with the viewer's changing perspective. The materials are enhanced by the overhead lighting at night and by the daylight beaming in the building during the day. 'The transition from daylight to evening and the illusion of depth is really quite magical,' says Hogan, the Interior Designer, 'and I love it because it's so simple.'

The rods are reflected in a 70-foot-long mirror wall, which further accentuates their shape with etched vertical, slightly angled lines that allow continuous T5HO strips concealed at the base and at the top of the mirror to emanate light. In a third echo of this linear formation, light peeks out from the creases and folds in a wall of fabric behind the manicure area in the rear of the space.

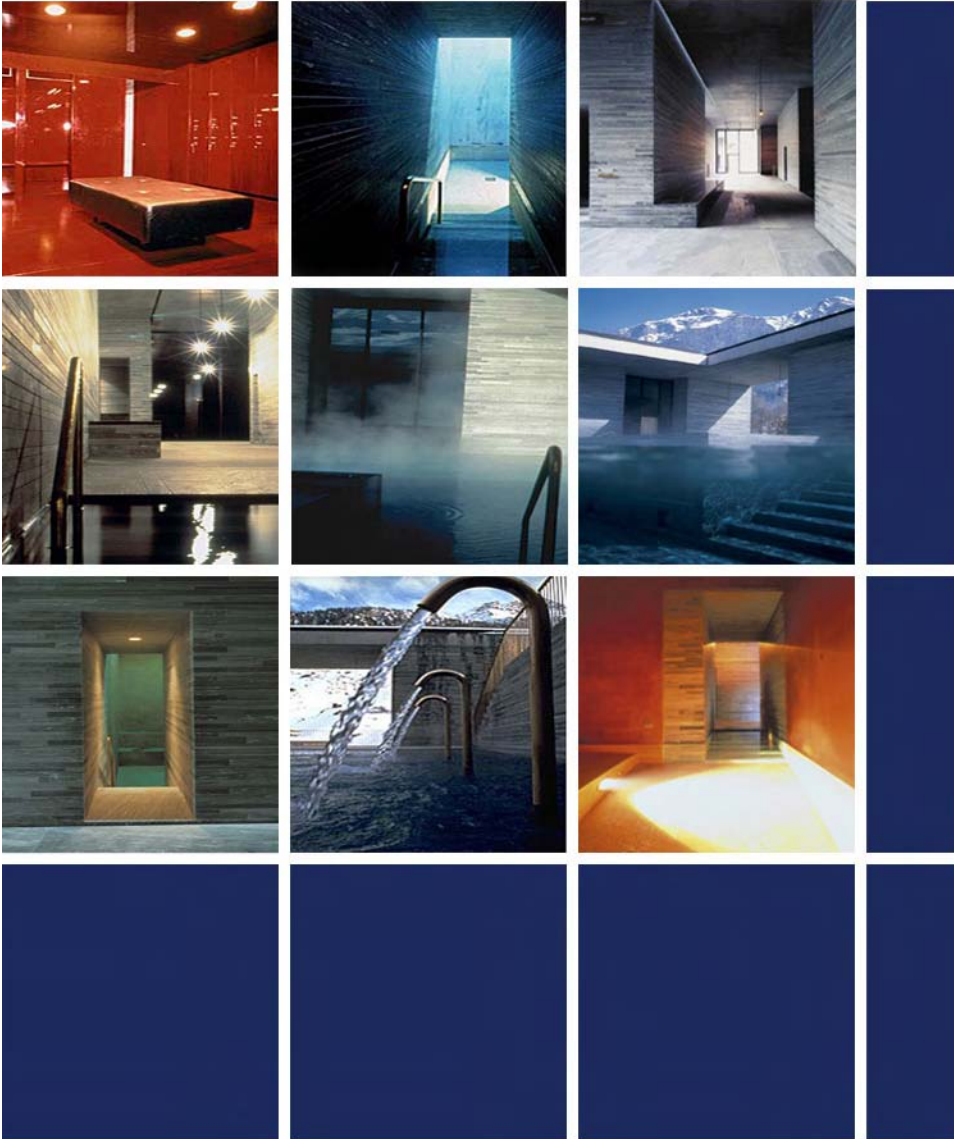
In addition to creating a striking visual identity, one of the client's primary requirements for Hogan/Macaulay was to provide sufficient ambient light in which to work. The designers responded with what they refer to as a 'light cloud': a group of low-hanging opal-glass cylinder fixtures that house 60W halogen lamps, and which were custom fabricated by a local glass artist.

In several cases, economic solutions entailed blurring the line between structure and lighting, by substituting architectural elements for light fixtures. For example, concealed access panels along the top and bottom of the mirrored wall house fluorescent striplights. Throughout the project, from the xenon lamps glinting off the copper curtain to the mirror that both echoes and reflects the play of light, each element of luminosity and architecture at Lumiere works hand-in-glove to create a fully integrated whole.



Precedent Study

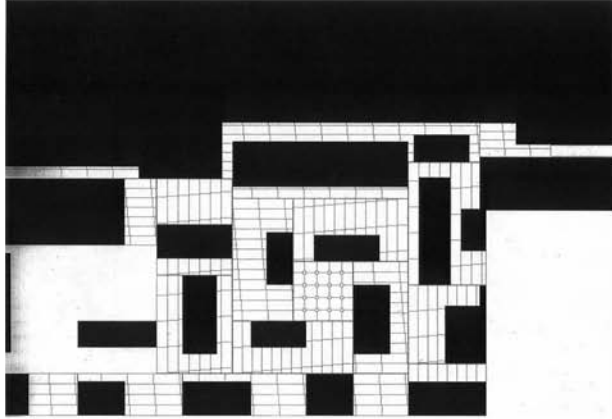
Thermal Vals: By Peter Zumthor: Located in Vals, Switzerland



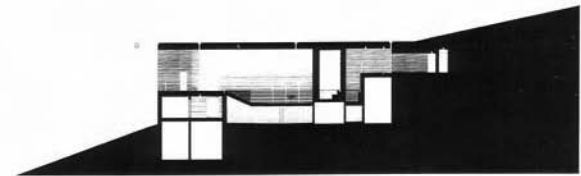
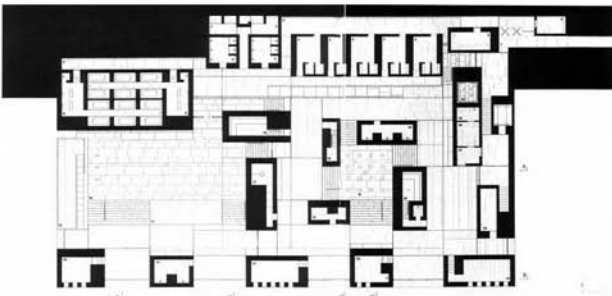
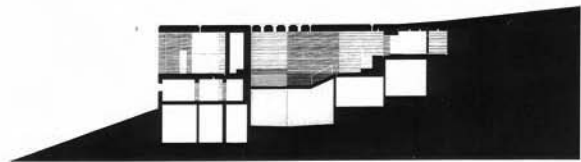
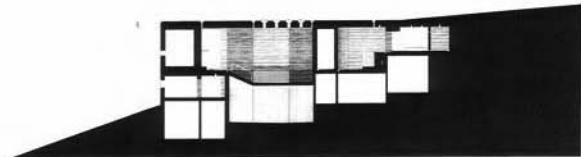
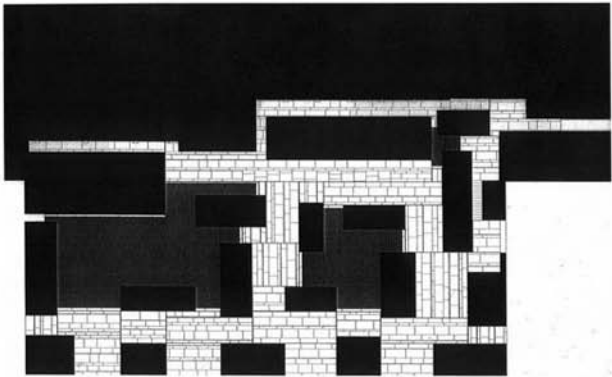
“The combination of light and shadow open and enclose spaces”

“The underwater lighting and filtering of blue light creates a sensation of floating”

Thermal Vals: By Peter Zumthor: Located in Vals, Switzerland



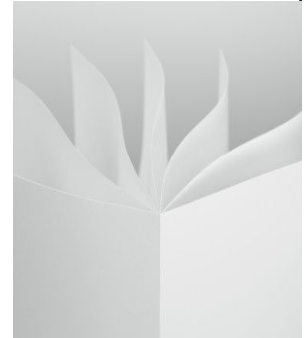
Precedent Study



Thermal Vals: By Peter Zumthor: Located in Vals, Switzerland

Analysis:

This building is built out of slabs of quartz organized around 2 pools. The succession of space is guided by light and temperature. Narrow slots and openings in the ceiling allow natural lighting in creating a connection to the outdoors. On the outside, large openings on the facade link the outdoor pool to the surrounding landscape, while smaller apertures bring light to the small spaces of the ground floor. The effect of light upon the materials stimulates the experience in the space. Lighting creates a dramatic difference at night in the bathing areas.



Precedent Study

Critique:

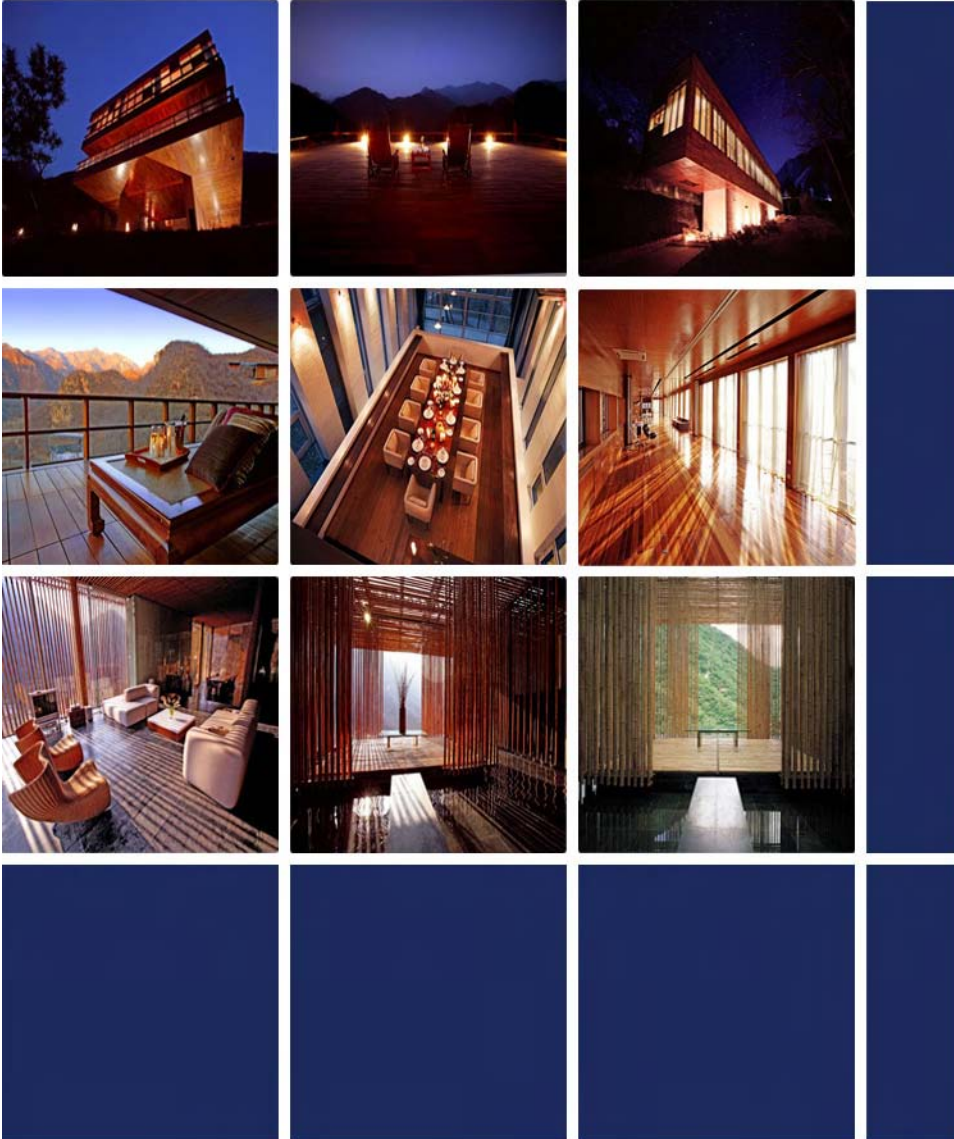
Swiss architect, Peter Zumthor approaches architecture from a unique source that is solely his, a unique source that is constantly morphing, constantly fluctuating- this unique source is his own experience.

Although it is an obvious statement, the realization is overlooked. It is through his own experiences that he is able to think forward, towards experiences in spaces, yet concrete. Zumthor focuses on the 'primary experiences' of architecture. The body and mind are in a constant dialogue with the surrounding materials, a dialogue that communicates memories, passing time, and ambitions. Zumthor is concerned with not the form, not the techniques, not the specific materials, but rather with the perception of the form, the perception of the details, and the perception of the materials. The "poetic quality" comes from the ability of the architect to create a "meaningful situation for (the materials)... since materials in themselves are not poetic.

Using light, Peter Zumthor successfully created a visual destination at the end of the hallways where the building opens to the exterior. Through the layering effect, the hallway has balanced lighting, and the right amount of contrast through light and shadow, yet the eye is still guided to the end of the hall.

There are very few direct lighting sources on the walls and ceilings. Most of the lighting seen comes from the glowing of the water. By eliminating the direct lighting the buildings lines dissolve into the distance.

Commune By The Great Wall: Located in the Shuiguan Mountains outside Beijing



The house becomes a natural consequence of the surrounding landscape

A consequence not of the location of the sun but the need of it

Shadows paint pictures on the walls

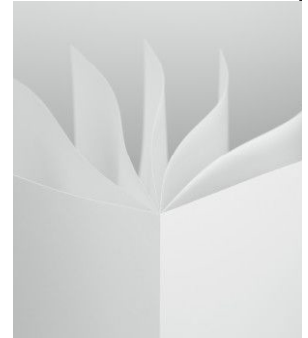
At night the glass lobby acts as a lantern to guide the guests home

Commune By The Great Wall: Located in the Shuiguan Mountains outside Beijing

Analysis:

The main focus of this precedent involves the experience it allows for the guests to enjoy. The Commune by the Great Wall Kempinski has become a showcase of contemporary Chinese and Asian architecture located outside of Beijing. The setting is beautiful with each House framing dramatic views of the landscape and The Great Wall. Specially arranged lighting reinforce the house's comfort zones and each offers different views, very different feelings and a range of architectural experiences. This hotel provides Private villas and rooms for a more private setting while enjoying the surrounding landscape. The Anatara Spa blends with the mountains and provides a sanctuary of privacy and tranquility. To maximize views to the prominent Great Wall and solar exposure in the continental temperate climate, a north-south orientation is adopted.

The "See and Seen House" uses large glass windows in which daylight is introduced to the interior, where light is modified and controlled, and from which views out beyond the building are obtained. This was successful in the fact that absence of windows dictates the exterior appearance, and our perception of the world outside which is associated with daylight and sunlight.



Precedent Study

Critique:

I enjoy the feeling of how the outdoor space feels as though it is floating over the landscape yet its edges seem like they melt into the horizon. The lighting is seen on the balcony appearing as it is spilling from the indoor illumination to the outdoor space. The most interesting lighting technique is probably the silhouetting, or shadow lighting. It creatively plays through bamboo material and the structural elements. The effect of this is made by the material, which is airy and open, allowing light to pass through creating shadows. This play of light and shadow is what makes the space come alive.

Spring Board





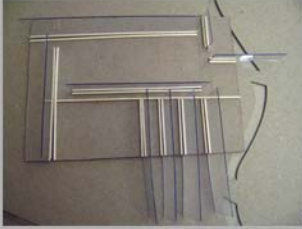
INVESTIGATION OF THE MASSING/SITE/DESIGN

The intent of this investigation is to play with building components in relation to the site.

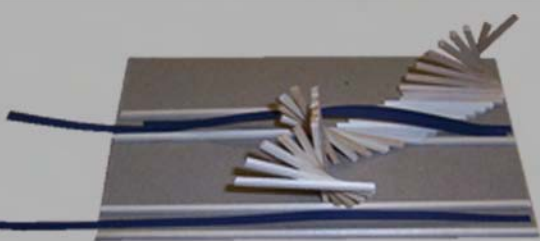
Water becomes a key element in the design with relation to the senses of the guest. It must feel present, alive, and fresh. It is important to determine the flow of water around and through the building to create a sense of presence. Natural hot spring pools are investigated by determining the location and size on the site. Massing of the building is studied by comparing the surrounding cabins and their functions.

The creative flow and movement of the building on the site attempts to mimic the landscape and its features through its design. This investigation studies the possibilities of expanding the building on the site in order to gain the maximum quality of the site and its natural features.

Spring Board



The study of linear forms reaching along the river



Movement across the creek with a continuous flow of the building structure

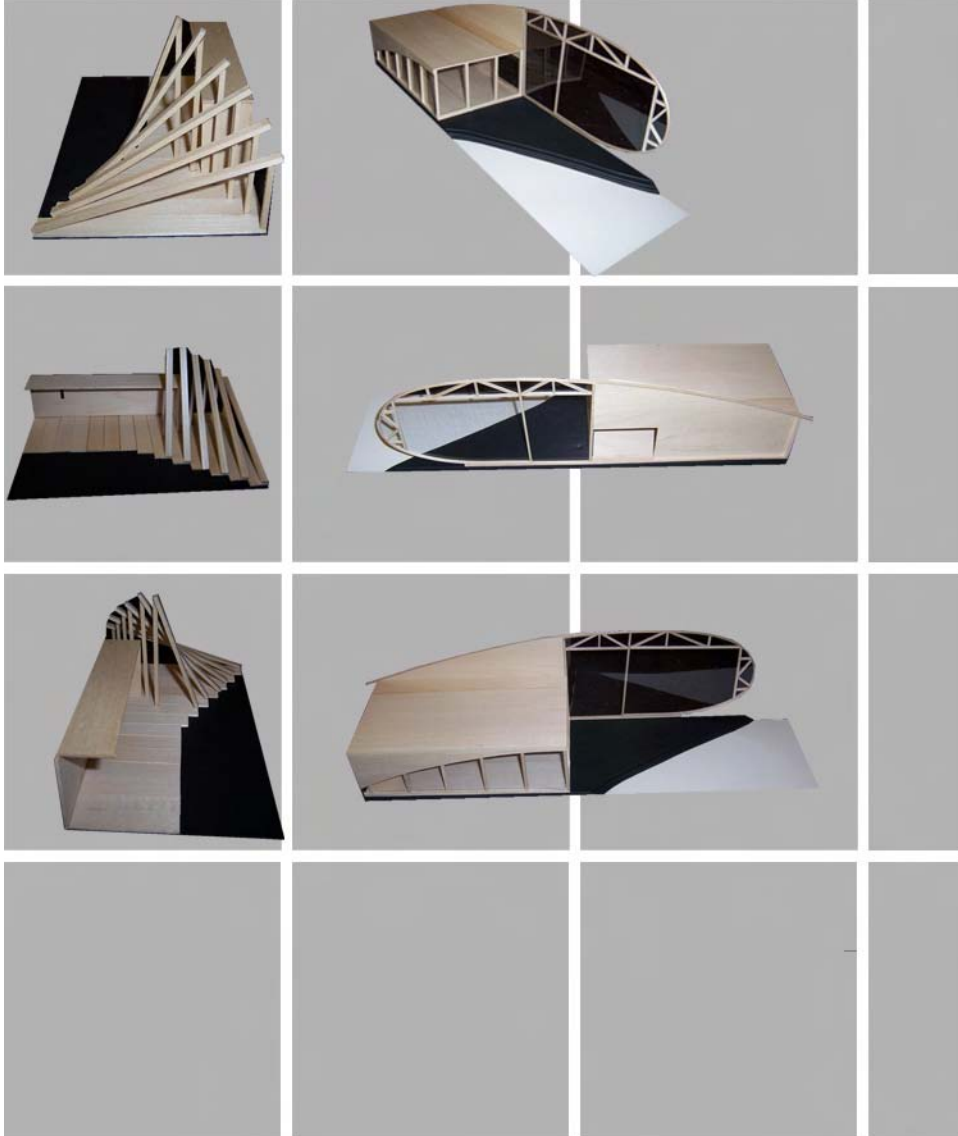


Studying the building envelope in relation to the openings to allow for light and water to enter



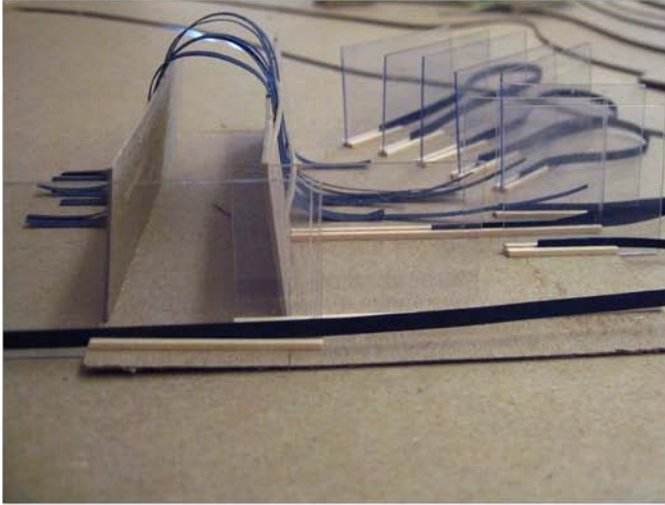
Design Investigation

Spring Board

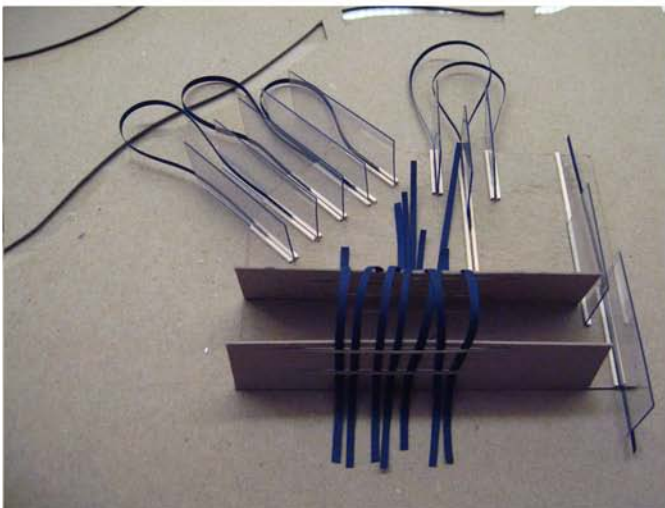


Design Investigation

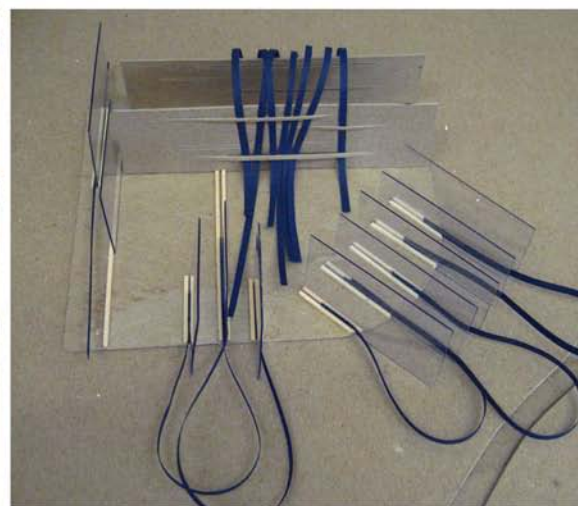
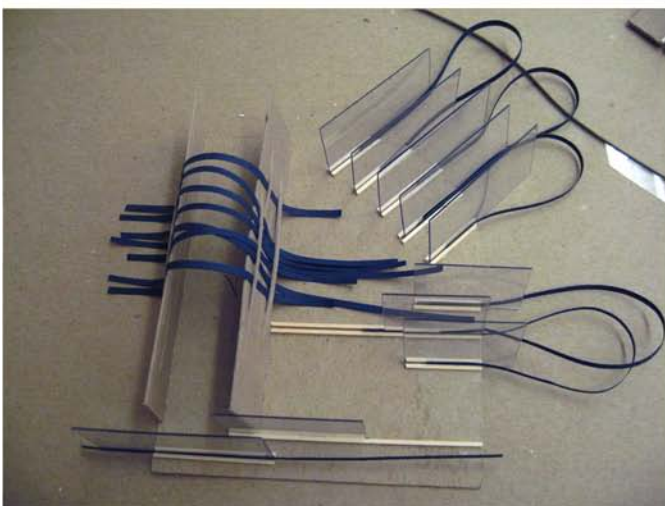
Spring Board



Design Investigation



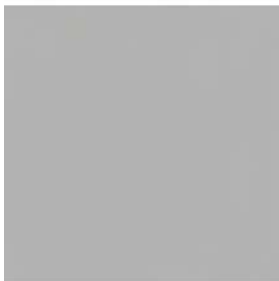
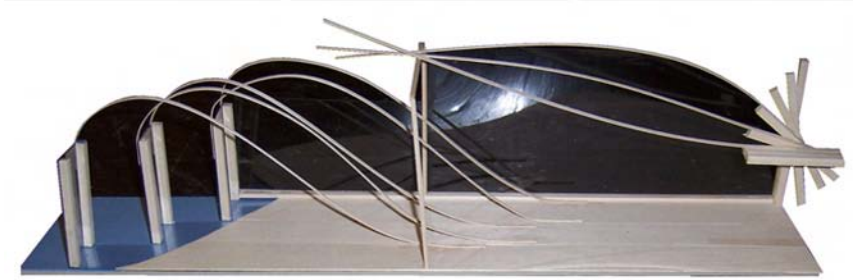
Investigating the possibilities of the flow of water throughout the building by allowing the natural flow of water to create organic forms along the creek. The glass forms act as dividers in attempt to create private bathing areas for guests.



Spring Board



Design Investigation



Materiality





Wood

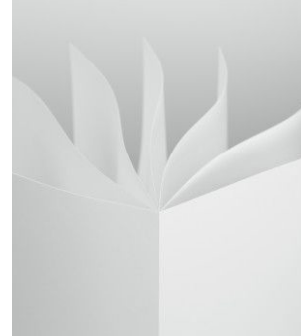
“Wood is natural, organic, light-weight, strong, readily accessible, and simple to work with in construction. Its wide variety of colors, textures, grain patterns, and fragrances gives designers a versatile and adaptable expressive tool for construction. Its warm aesthetic and easy workability has made it an appealing architectural material for centuries.”

Wood as an architectural material has become very diverse and abundant through the history of architecture. Timber framing has been a common construction method with wood. It originated with the knowledge that timbers from the forest could be hand-hewn into square log shapes and joined with mortise and tenon, dovetail, or pegged joints.



Material Study

Materiality



Material Study

Log construction is present on the existing site making wood an ideal material for the new building. The log construction is characterized by its corner joints that interlock with a cross-lap connection. The building is constructed of light wood frame construction anchored to the site by reinforced concrete. The new design of the expresses the qualities of this material by inviting sunny exposures through slender openings. Guests are meant to be stimulated by the richness and play of light through the vertical wall surfaces. Wood becomes the single architectural cladding solution for most of the programmatic and environmental situations.

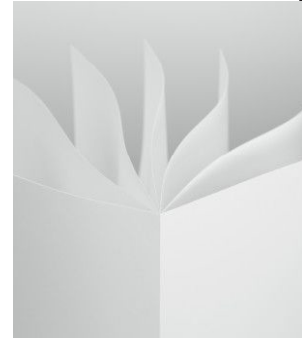
Site Analysis



Thermal Spa Resort: Location: Cebolla Hot Springs, CO

The goals of the new building in relation to the site will encourage the protection and maintenance of the unique rural features and characteristics which are significant links to the past, present, and future. This design will complement and create appropriate community features such as roads, trails, open space and building patterns, and respect the unique sense of existing community that distinguishes one area from another. This design will retain and preserve cultural resources such as the hot springs that symbolize the community's identity and incorporate a well-defined spa resort to provide a focal point to the rural community.

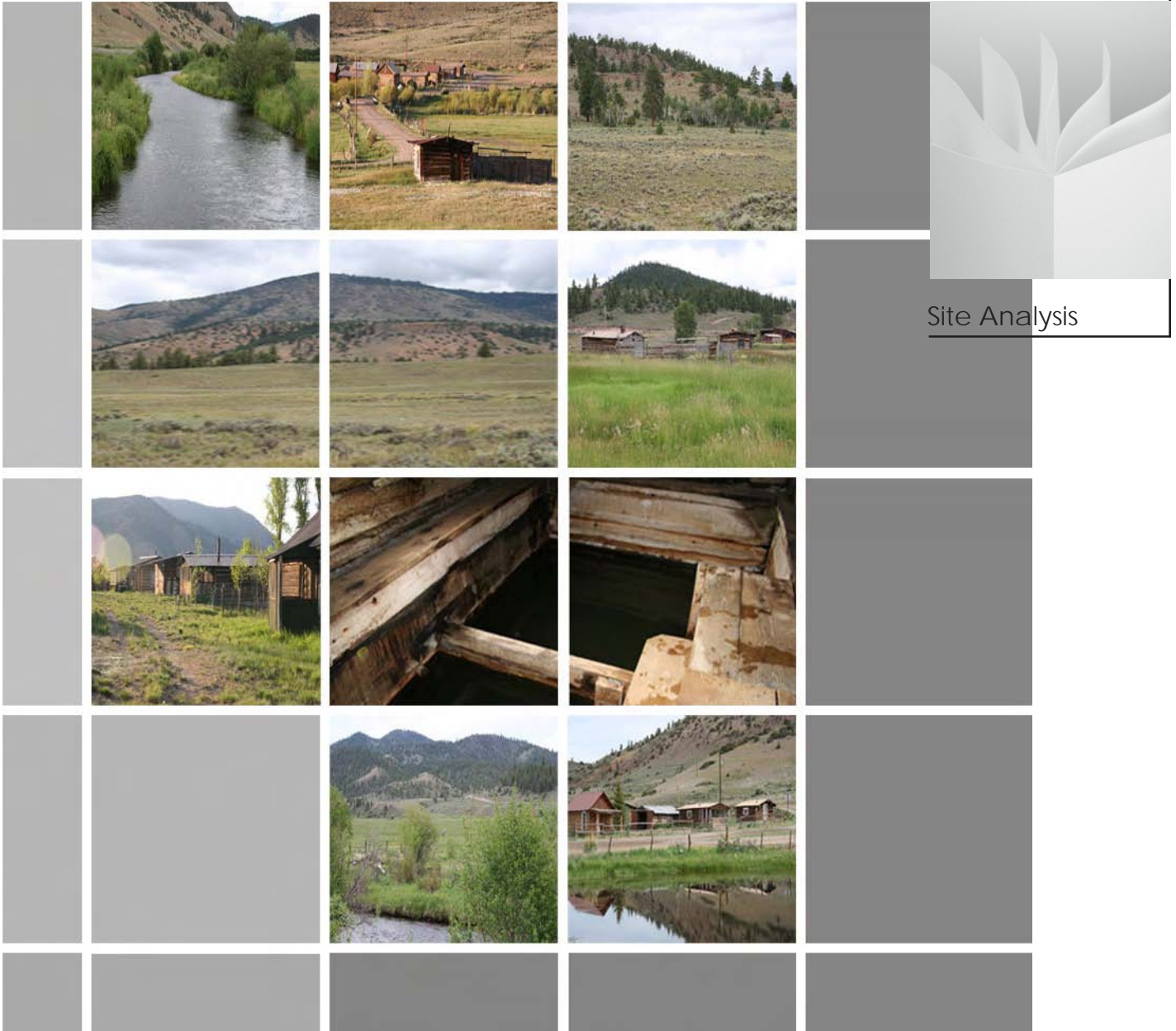
The goal of the design is being harmonious with the topography of the area and to use scale and character of the surrounding setting, incorporating a variety of unique building layouts which are sensitive to the natural features and uses of land including topography and vegetation. The primary issue for residents of Powerdorn is the desire to maintain the rural character of the area while acknowledging and expecting that some growth will continue.



Site Analysis

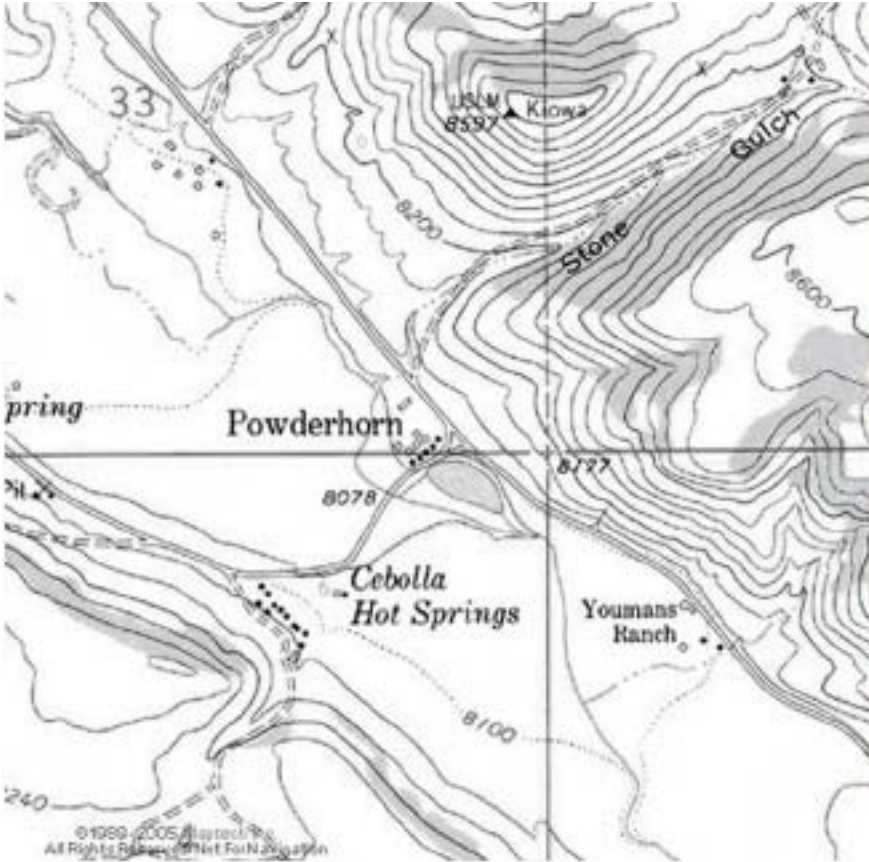


Cebolla Hot Springs Property Photos



- ½ Mile access to Cebolla Creek
- Old hot spring cabins
- Geothermally fed hot springs
- 90 acres of producing meadows
- Surrounded by ponderosas and rock cliffs
- Optimum sunlight conditions

Cebolla Hot Springs



Site Analysis

Northeast boundary surrounded by rock cliffs and ponderosas

35 Acres of land with rustic cabins and barn

½ Mile access to Cebolla Creek on southwest boundary

Estimated Population in November 2007: 5,309

Elevation: 7730 ft.

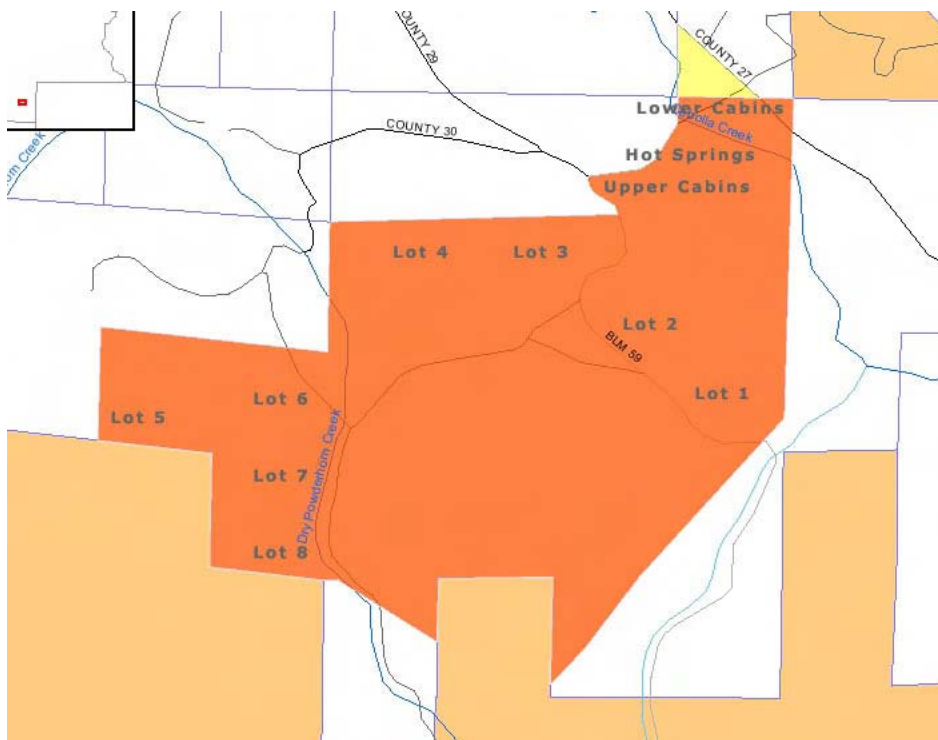
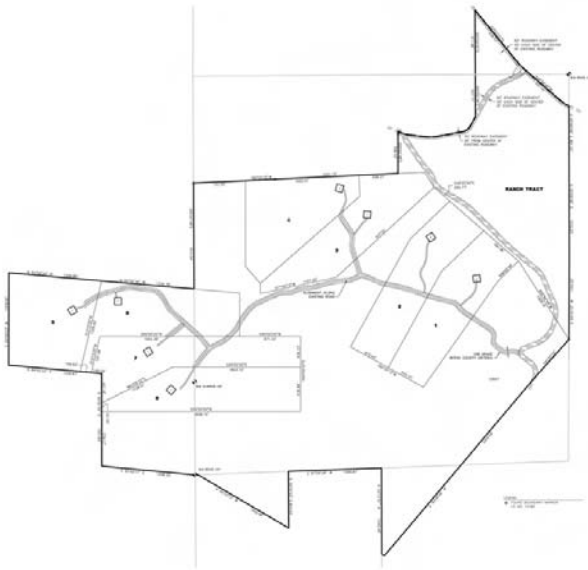
Tourist attractions: Pioneer Museum (Cultural Attractions- Events- & Facilities; 803 East Tomichi Avenue), United States Government - Interior Dept- National Park Service- Curecanti National Recreation (Recreation Areas; 216 North Colorado Street).

Thermal Spa Resort: Location: Cebolla Hot Springs, CO

Cebolla Hot Springs Ranch, located outside of Powderhorn, Colorado, is approximately 40 minutes from Crested Butte, Colorado. This was a historic ranch that has now been put up for sale. This was a private ranch and was exclusive to the previous owners. There are currently geothermal hot spring guest cabins on site. This ranch offers access to the Cebolla Creek, a 3-acre pond, and geothermal hot springs.



Site Analysis

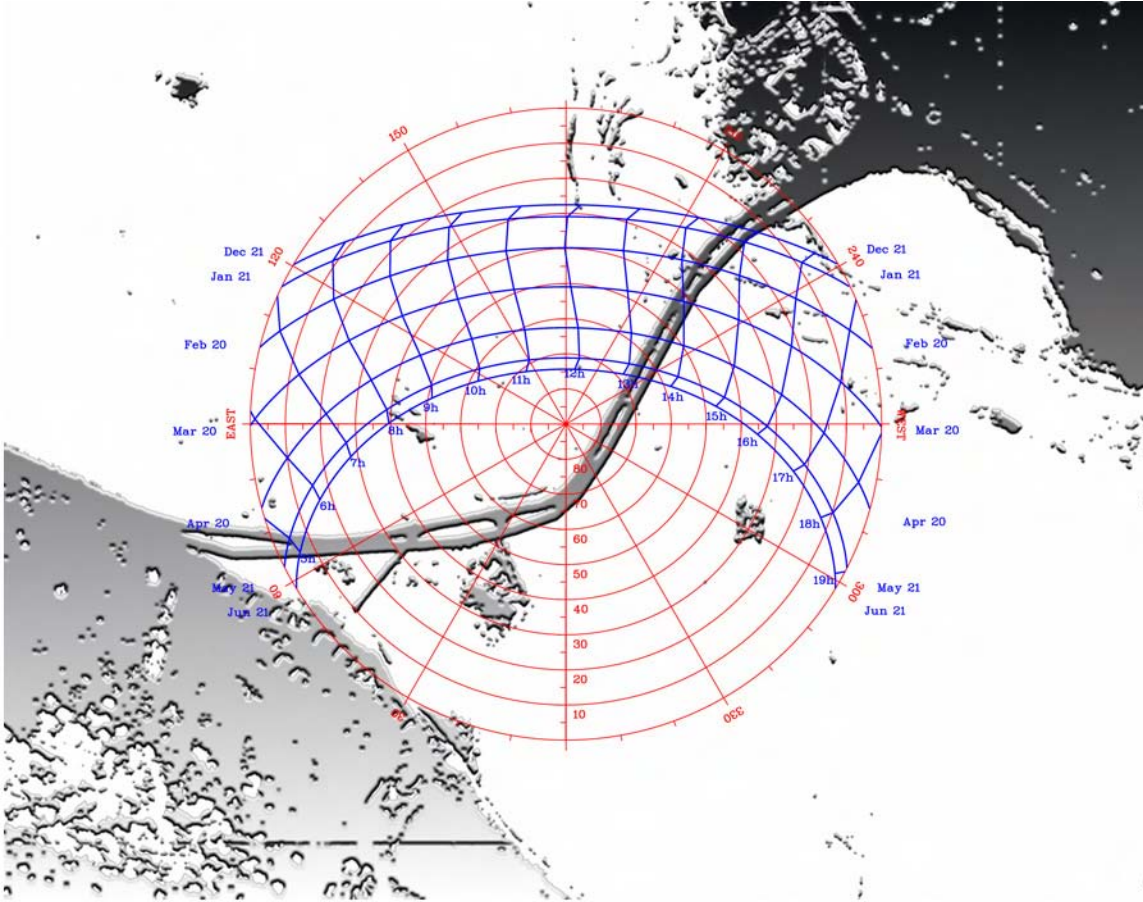


Thermal Spa Resort: Location: Cebolla Hot Springs, CO



Site Analysis

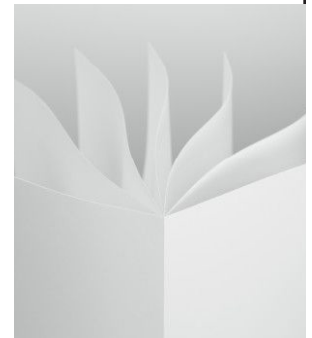
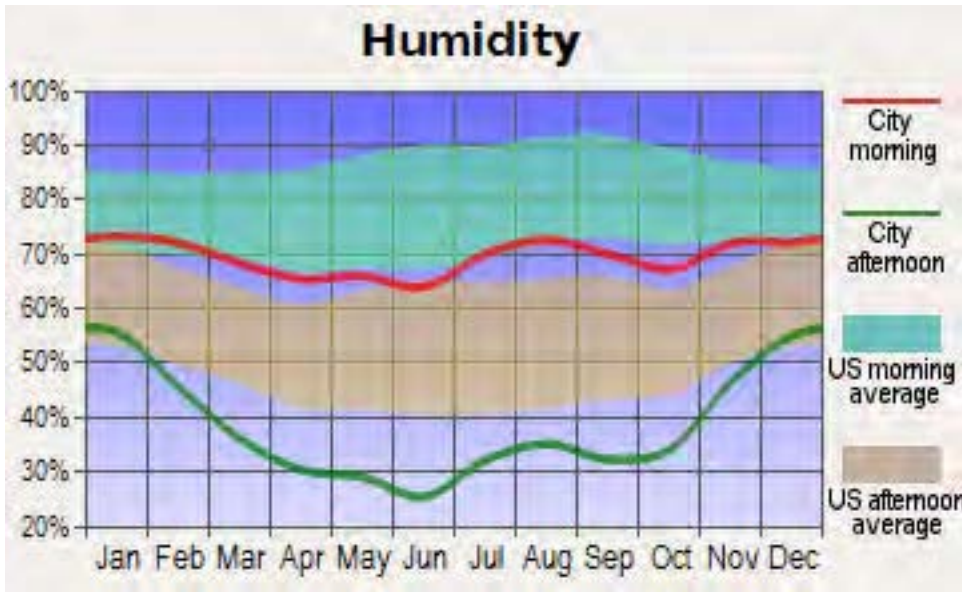
Thermal Spa Resort: Location: Cebolla Hot Springs, CO



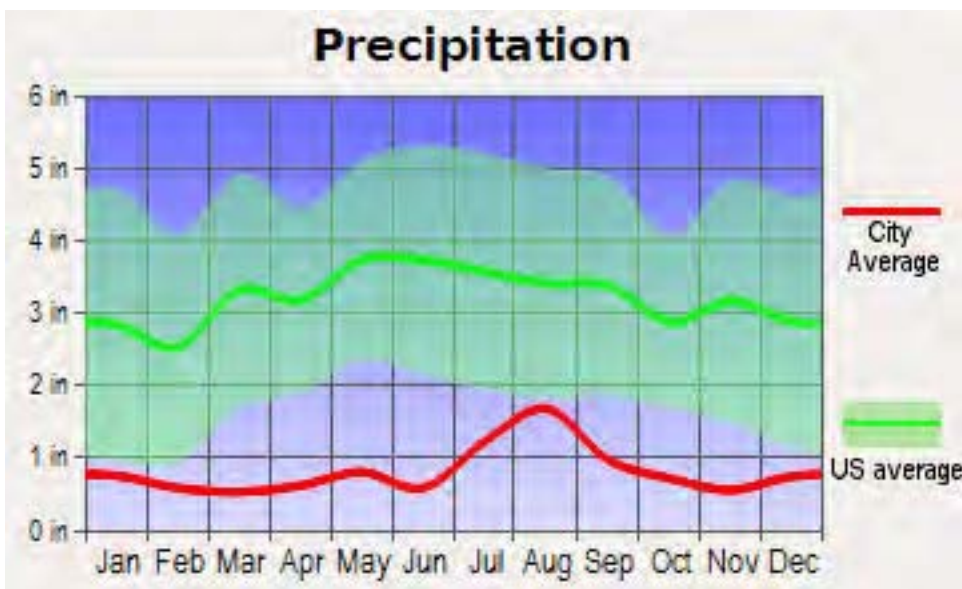
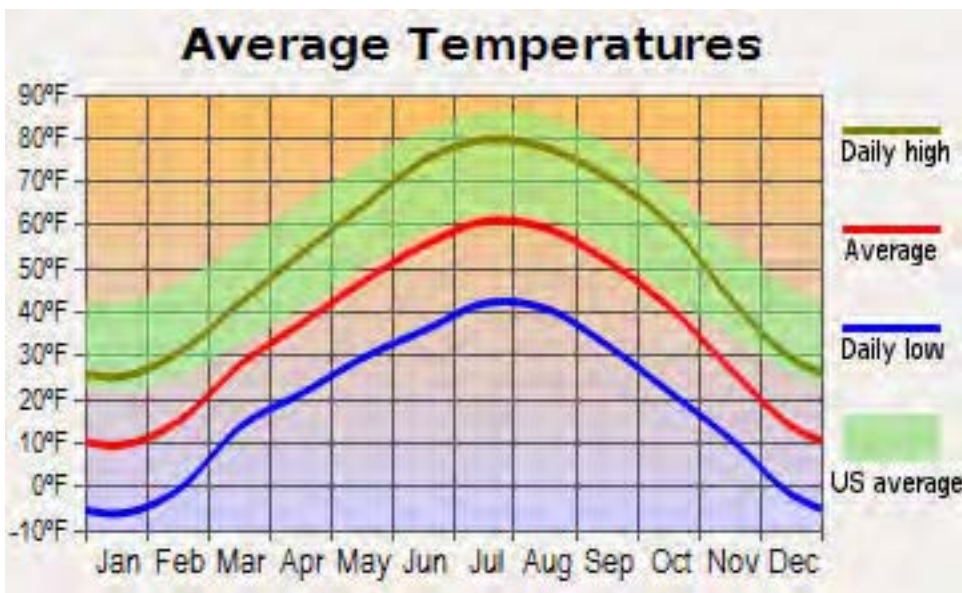
Site Analysis



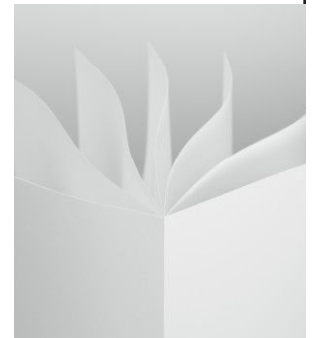
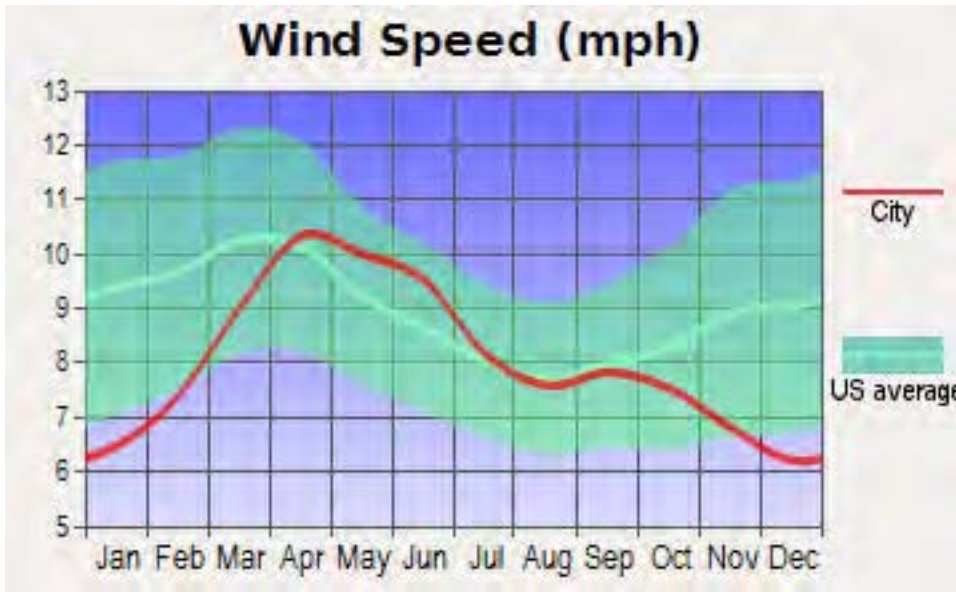
Thermal Spa Resort: Location: Cebolla Hot Springs, CO



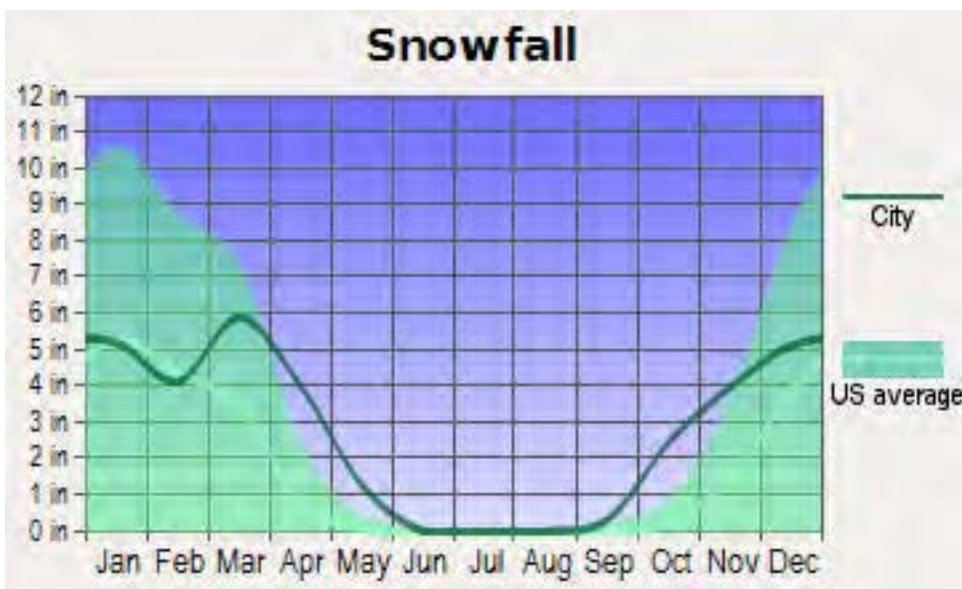
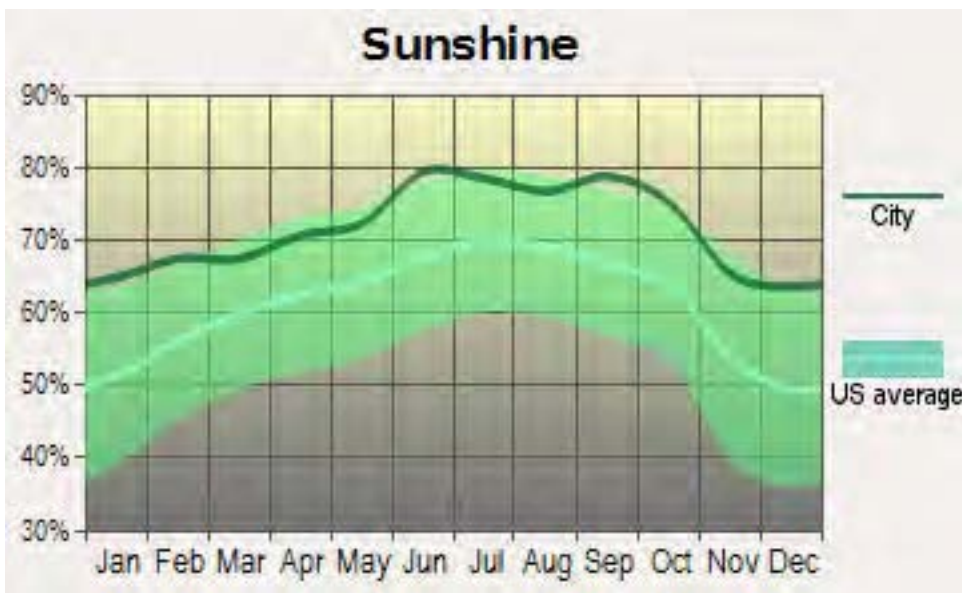
Site Analysis



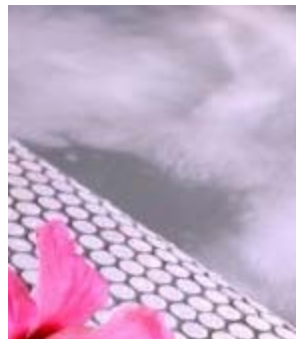
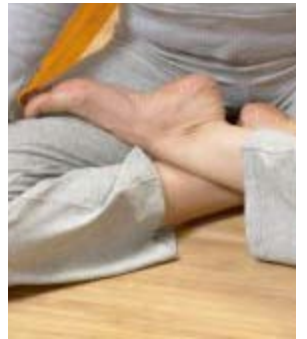
Thermal Spa Resort: Location: Cebolla Hot Springs, CO



Site Analysis



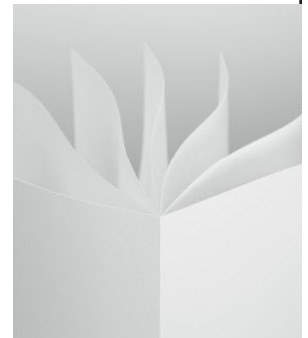
Program/Statements



Program Summary

Program Quantitative Summary

Program Space	Qty.	Square Footage
A. Dining/Relaxation Space		
a.1 Lobby	510	
a.2 Café	725	
a.3 Kitchen	900	
a.4 Outdoor Terrace	1,495	
a.5 Dining Area	1,550	
a.6 Circulation	297	
a.7 Restroom	2-150	300
a.8 Outdoor Viewing Areas	2-350	700
a.9 Outdoor Viewing Area	530	
a.10 Indoor Viewing Area	1,710	
a.11 Office	290	
a.12 Mechanical Room	290	
Total	9,279	
B. Resort Building		
b.1 Rooms	8-545	4,360
b1.a Bathroom	104	
b.2 Circulation	2,560	
Total	6,920	
C. Spa Building		
c.1 Private Sauna	5-136	680
c.2 Hot Spring Pool	5-105	525
c.3 Woman's Changing Room	825	
c.4 Men's Changing Room	560	
c.5 Indoor Hot Spring Pools	2-281	562
c.6 Indoor Hot Spring Pools	2-235	470
c.7 Bathing Rooms	5-85	425
c.8 Massage Rooms	4-70	280
c.9 Activity Room	470	
c.10 Circulation	1920	
Total	6,717	
D. Private Retreat		
d.1 Bathroom	4-1,133	
d.2 Kitchenette	165	
d.3 Bedroom	165	
Total	4,532	



Program Summary

Program Summary

Program Qualitative Summary

Spa Building

Activity Rooms

Activities:

- Various organized classes and workshops such as yoga, meditation, movement and exercise programs, massage rooms, private bathing areas.

Occupants:

- Visitors, Staff

Space Adjacency:

- Connected to primary circulation.

Design Qualities:

- Mood lighting, open space; bright and airy, natural light
- Uplifting atmosphere with minimal distraction.

Behavioral Qualities:

- Space should be flexible and open for various activities.

Acoustics:

- Should be acoustically separated from other spaces to provide quiet environment.

Illumination:

- Artificial lighting and natural lighting

Furniture and Equipment:

- Mirrored wall surface, wood, concrete, glass

Special Considerations:

- Flexible, aerobic floor system to provide soft and hard surfaces, wood flooring in saunas



Program Summary

Program Summary

Program Qualitative Summary

Individual Meditation Niches/Viewing Areas (Indoor and Outdoor)

Activities:

- Individual spaces for contemplation, meditation, and reading, viewing

Occupants:

- Visitors

Space Adjacency:

- Connected to primary circulation.

Design Qualities:

- Intimate space.
- Connection to exterior (view).

Behavioral Qualities:

- Secluded, minimal distraction.

Acoustics:

- Should be acoustically separated from other spaces to provide quiet environment.

Illumination:

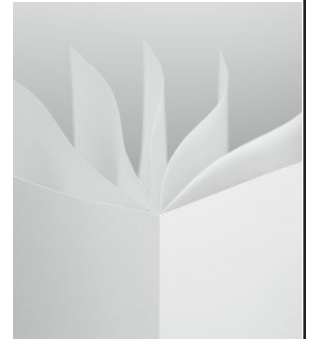
- Electric lighting to complement natural light.

Heating/Cooling/Ventilation:

- Operable windows desired.

Furniture and Equipment:

- One form of seating.



Program Summary

Program Summary

Program Qualitative Summary

Lounge/Dining and Cafe

Activities:

- Dining, socialization and relaxation.

Occupants:

- Visitors, Visiting Professionals, Staff

Space Adjacency:

- Connected to primary circulation.
- Adjacent to kitchen.

Design Qualities:

- Space should be flexible and open.
- Bright and airy space.
- Views to exterior.

Behavioral Qualities:

- Adequate circulation between seating.

Acoustics:

- Reduce sound transmission to other spaces.

Illumination:

- Electric lighting to complement natural light.

Heating/Cooling/Ventilation:

- Operable doors and windows leading to patio

Furniture and Equipment:

- Various seating and tables.
- Bar with adequate counter space, storage



Program Summary

Program Summary

Program Qualitative Summary

Private Cabins

Activities:

- Private guest relaxation cabin

Occupants:

- Visitors

Space Adjacency:

- Adjacent to surrounding buildings
- Set within landscape

Design Qualities:

- Space should be flexible and open with maximum views
- Bright and airy space.

Behavioral Qualities:

- Adequate circulation, quiet

Illumination:

- Electric lighting to complement natural light.

Furniture and Equipment:

- Table and chairs with additional seating.
- Sink with counter.
- Refrigerator
- Dishwasher
- Cabinet storage
- Lounge Area



Program Summary

Program Summary

Program Qualitative Summary

Common Areas/Reception/Lobby/Circulation

Activities:

- Greeting and reception.
- Waiting and gathering.
- Information for visitors.

Occupants:

- Visitors, Staff

Space Adjacency:

- Connected to main entry.
- Connected to primary circulation.

Design Qualities:

- Space should be flexible and open.
- Bright and airy space.
- Create impression for center.

Behavioral Qualities:

- Adequate circulation.

Illumination:

- Electric lighting to complement natural light.

Furniture and Equipment:

- Various seating.
- Reception desk with storage.



Program Summary

Program Summary

Program Qualitative Summary

Resort

Activities:

- Overnight rooms for guests, private hot spring pools

Occupants:

- Visitors

Space Adjacency:

- Adjacent to surrounding buildings
- Set within landscape

Design Qualities:

- Space should be flexible and open with maximum views
- Bright and airy space.

Behavioral Qualities:

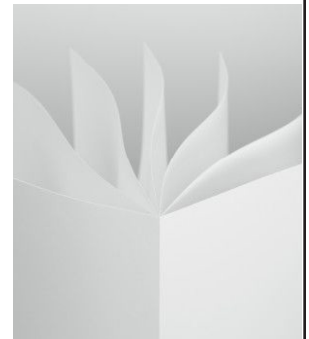
- Adequate circulation, quiet

Illumination:

- Electric lighting to complement natural light.

Furniture and Equipment:

- Bed, Closet
- Lounge Area
- Private Bathroom



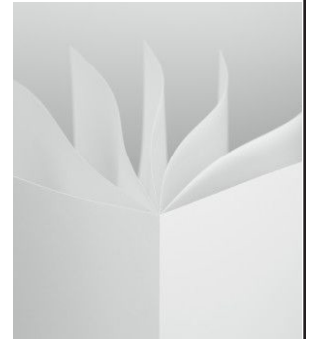
Program Summary



Yoga

The physical body, mind, and emotional body are all celebrated in the yoga rooms. Thoughts and feelings are completely intertwined in the fabric of the body, so yoga often initiates the release of emotions. With a focus on balanced breathing, even muscular engagement and uniform stretching, mindfulness, and a positive mind-set, the controlled light is important to allow concentration.





Massage

The massage rooms are clean, cozy, and comforting with views of the surrounding mountains. The ambiance of these rooms is achieved through subtle indirect lighting creating a calming affect.





Bathing

The Private pools on the outside with large openings on the facade link the outdoor pool to the surrounding landscape, while natural light is brought to the small pools. The effect of light upon the materials stimulates the experience in the space. These areas are private areas where one person or a couple can bath in the natural hot water.





Actions

Sauna Bathing

The pleasure of sauna bathing is tied to its surrounding views and experience. These private rooms allow for the guests to relax and refresh their body and soul. These rooms are quiet with soothing light and a well ventilated interior.





Actions

Dining

The resort includes a signature restaurant and bar with an outdoor terrace framing the Mountains. Guests can enjoy a nice and healthy meal close to their rooms. The natural lighting is linked directly to the viewing of the landscape.





Resort

A strong sense of ambiance is important created by light itself. The sleeping areas are more complicated then meets the eye because although a darker room is great for sleeping, there are other tasks that occur in these rooms such as reading, mediating, and dressing.



Design Process

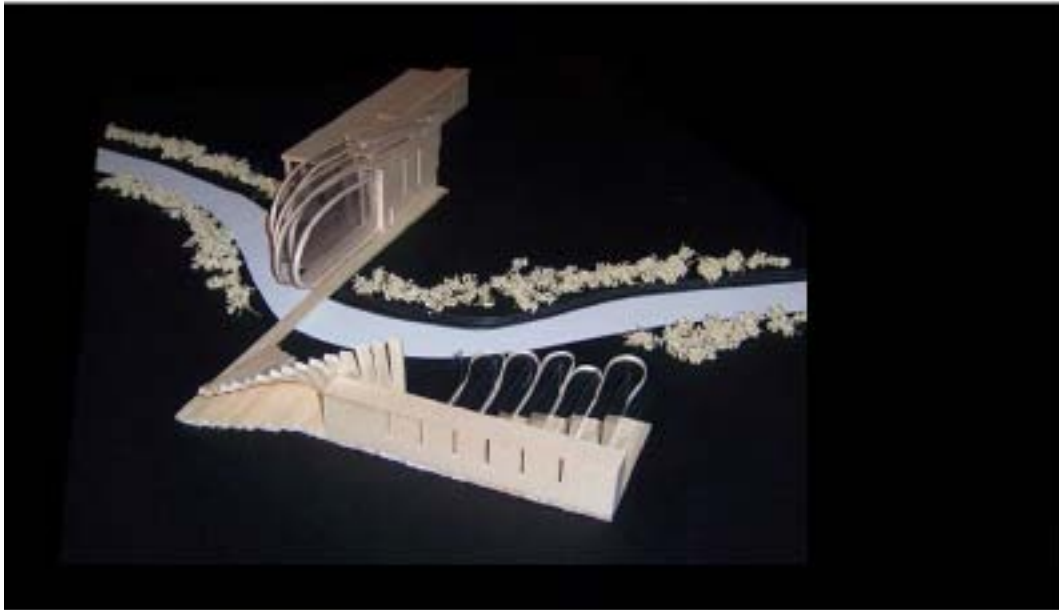


Schematic Design

Design Process

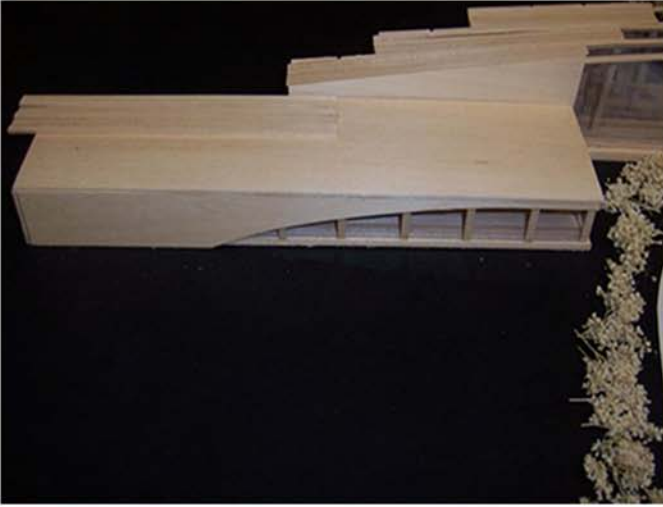


Schematic Design



The goal of the design, blending the building with the site that it sits on, is guided by the lighting design that is carried through the exterior and interior. The lighting plan creates views and lighting schemes that bring the remainder of the exterior to the interior. The lighting plan of this thermal spa highlights the natural landscape. During the night, the large amounts of glass allow the building to glow from the interior lighting.

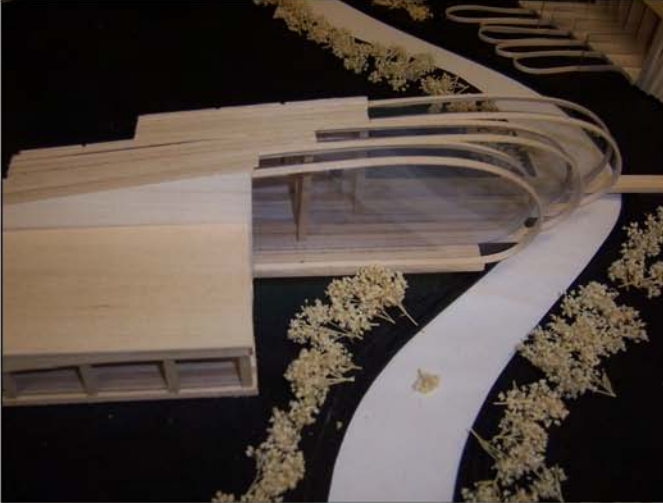
Design Process



Schematic Design

Design details focusing on the organic forms that encompass hot spring pools along the water. The pools are situated along the water to allow guests to interact with the landscape. The building form flows across the river to create a sense of continuous movement.

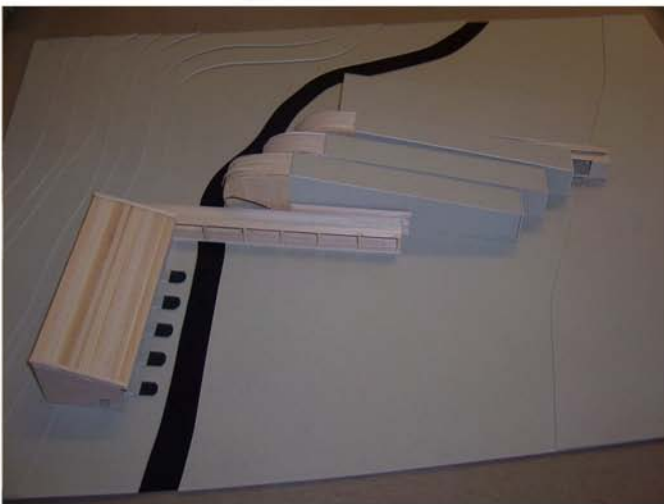
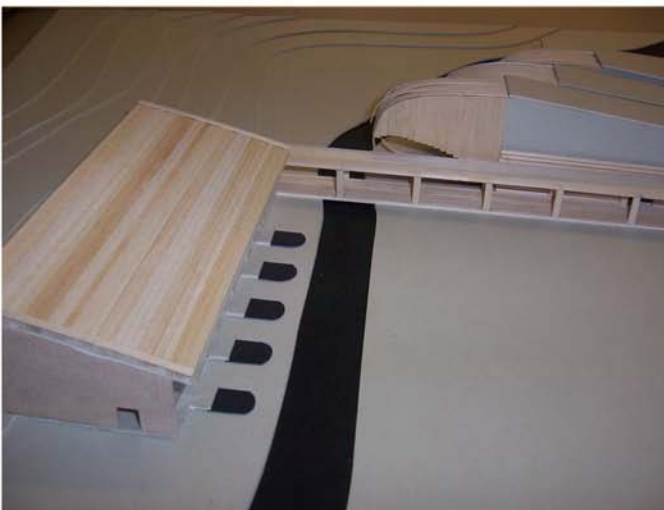
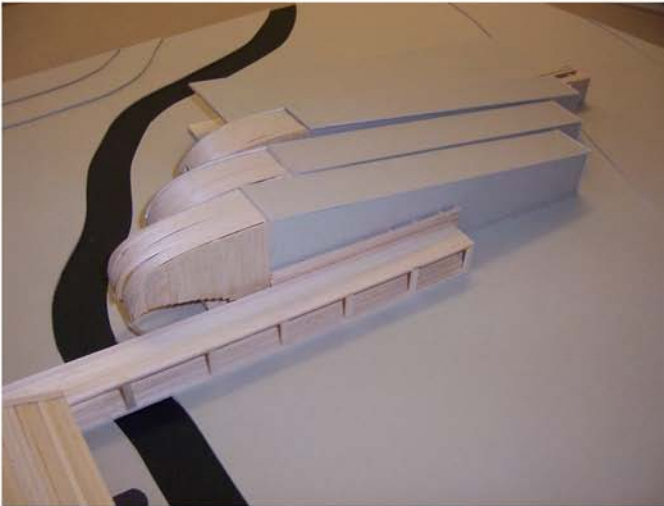
Design Process



Schematic Design

The large curves reach over the water acting as areas that people can relax and enjoy the views of the surrounding landscape. They are surrounded by large glass elements to create an enclosure from the weather. The bridge crosses the water, reaching out from the curves, allowing guests to go to the spa building.

Design Process



Design Development

The building forms transition to a feeling of more enclosure limiting the sun exposure and creating private areas. The hot springs remain situated along the river with private sauna rooms attached to the interior. The bridge that reaches over the water becomes enclosed for guest to travel. The linear forms reaching over the water attempt to situate themselves in relation to the water flowing through the site. An addition off the main building allows for more room for guest rooms.

Design Process



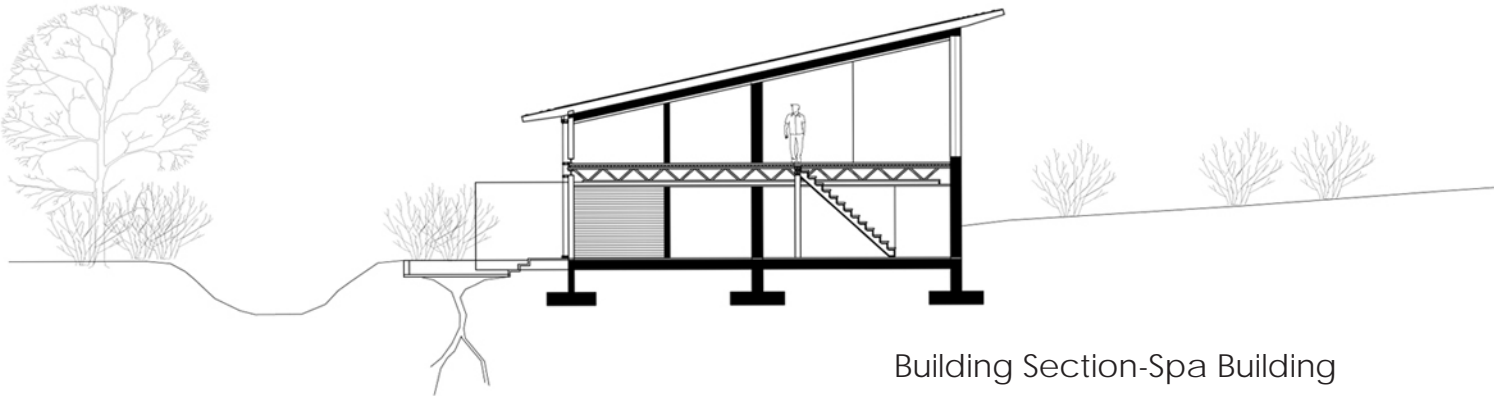
Design Development



Design Process



Design Development



Building Section-Spa Building

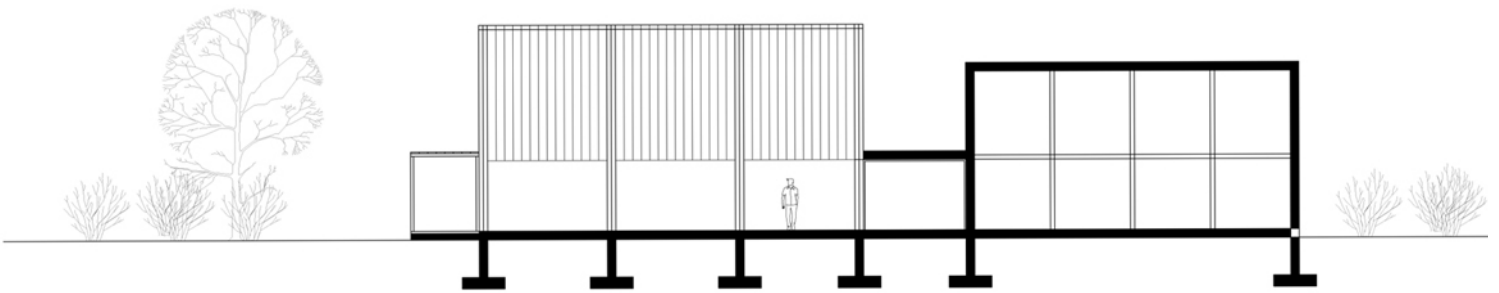


Building Elevation-Spa Building

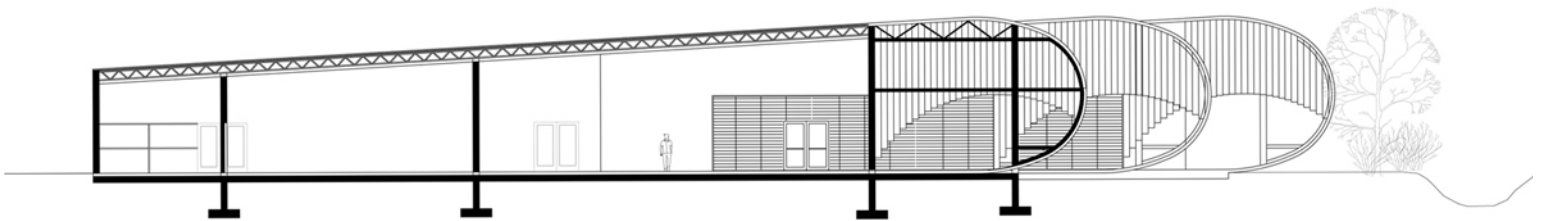
Design Process



Design Development

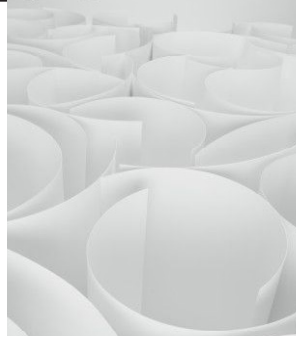


Building Elevation-Main Building



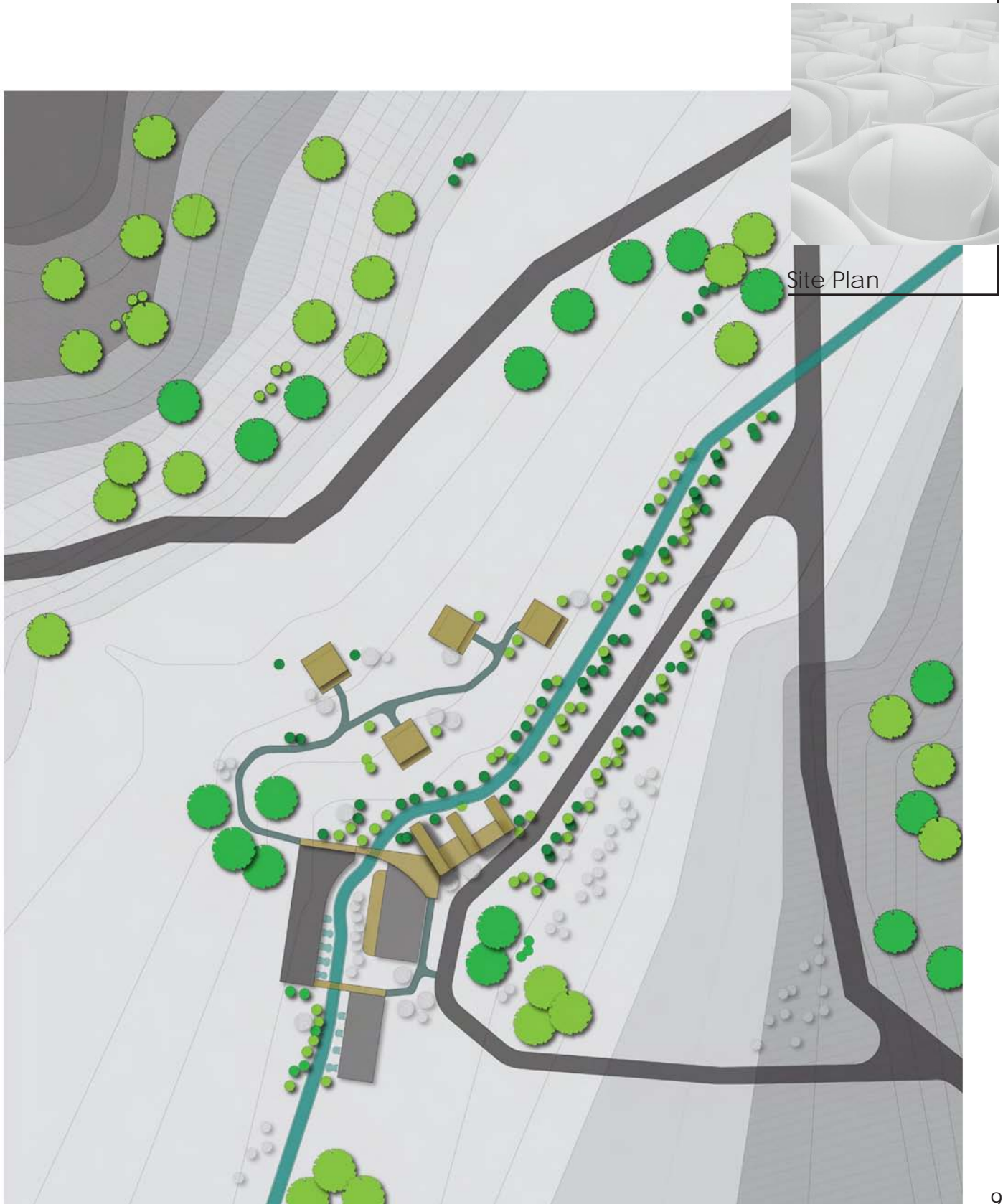
Building Section-Main Building

Final Design

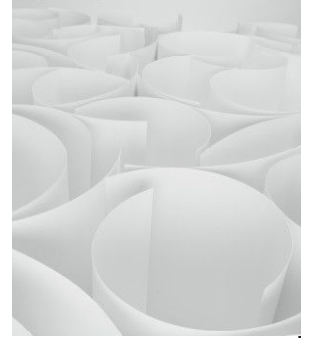


Final Design

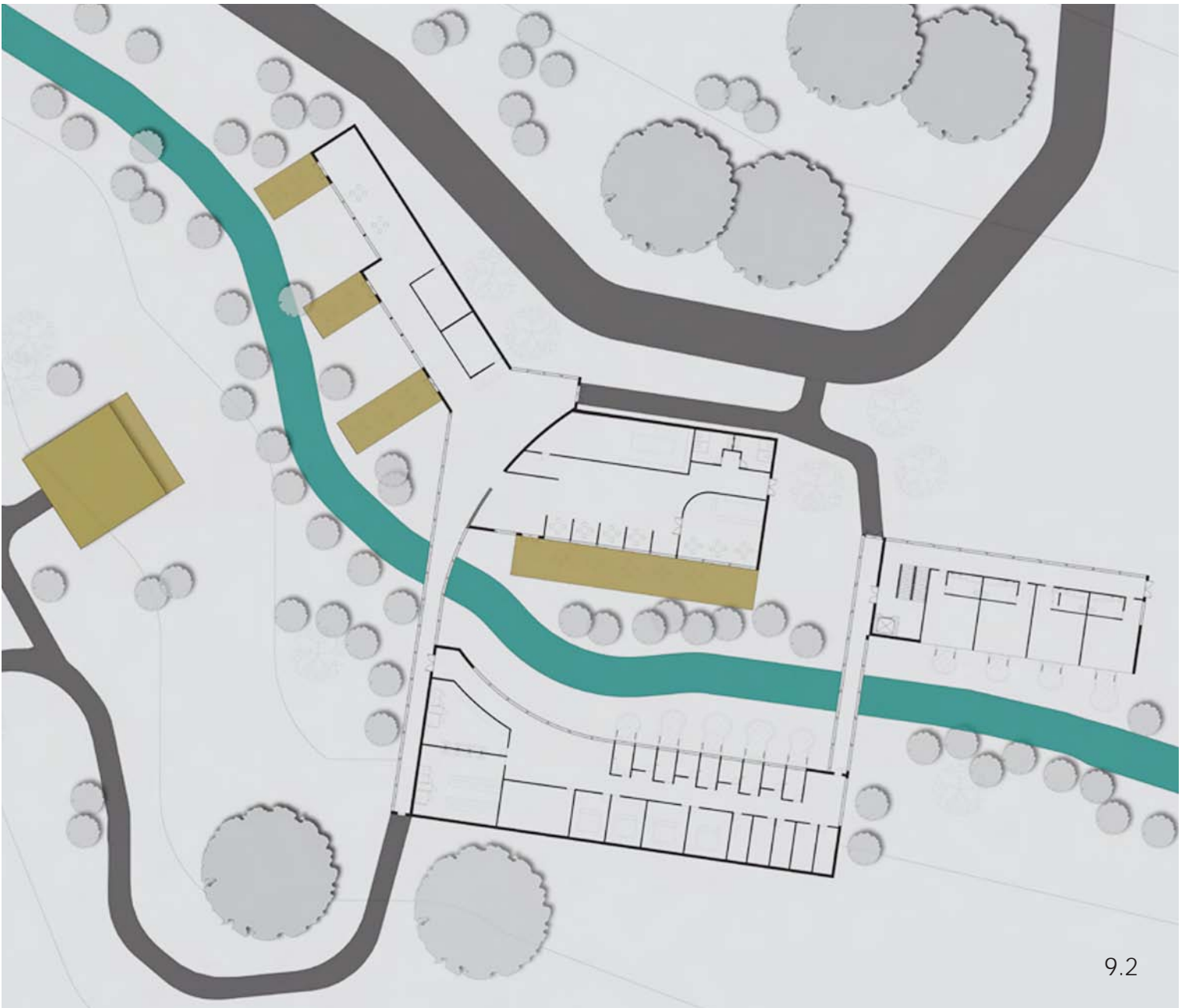
This site diagram demonstrates how the building is situated on the site providing maximum quality of access, views and light, and integration of the water, landscape.



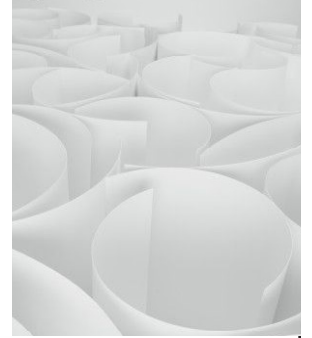
Final Design



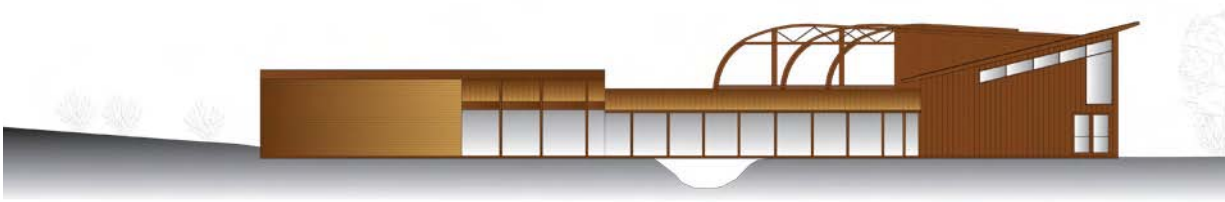
Floor Plan



Final Design



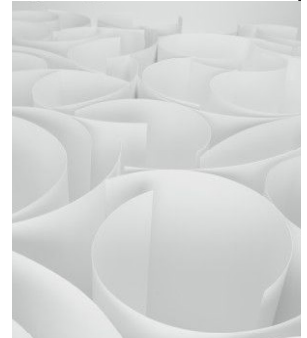
Elevations



Final Design

DESIGN INTENTION

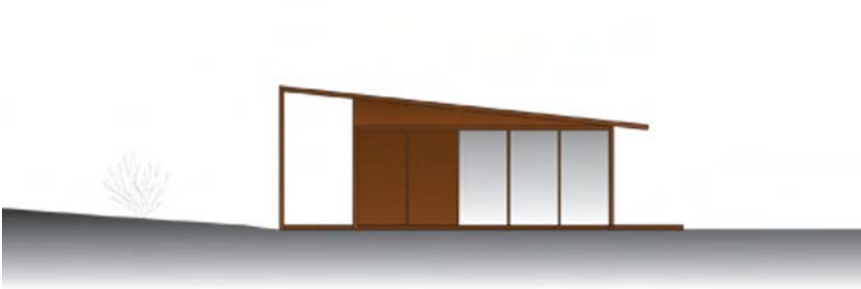
The small retreat building was designed for the privacy of guests. They are all situated against a backdrop of mountains and vegetation adjacent to the Cebolla Creek. Inspired by the remaining cabins on the site, the design goal was to create simple plan that is built of a bold wood construction that has been reinterpreted for a modern use. Insulated glass is the weather barrier on all sides with screens designed from wood to filter light and view.



Guest Retreats



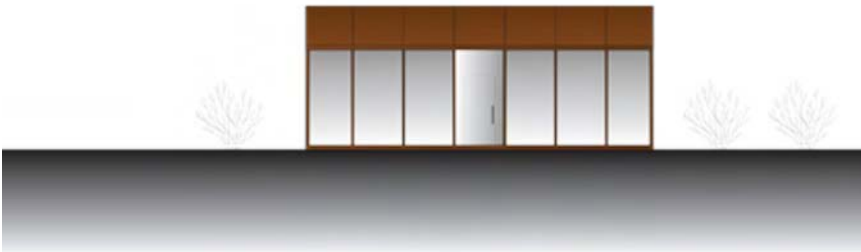
Final Design



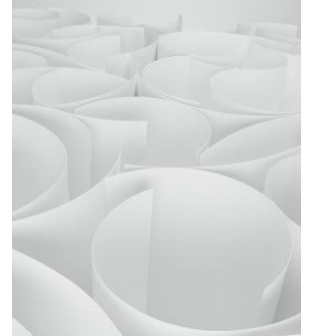
South-East Elevation



South-West Elevation

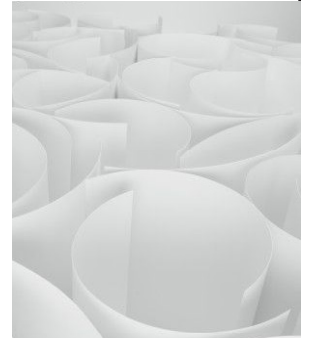
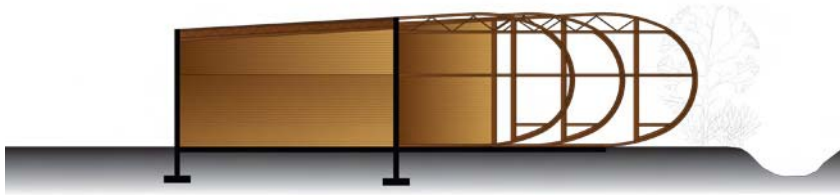
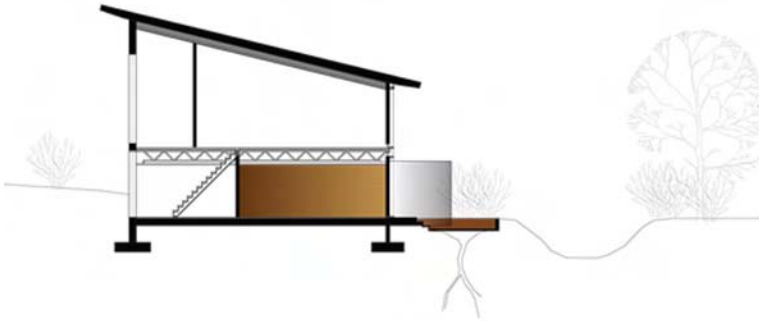


North-East Elevation



Guest Retreats

Final Design

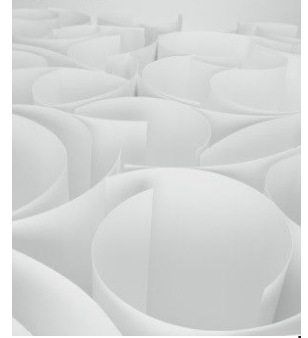


Sections

Final Design



Private Sauna attached to natural hot spring pool



Perspectives

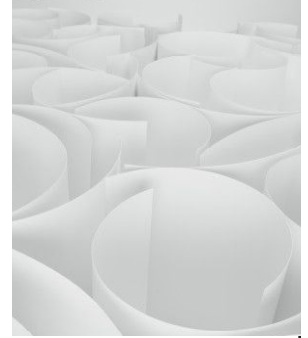


View of the interior hallway in the spa building looking at surrounding activity rooms.

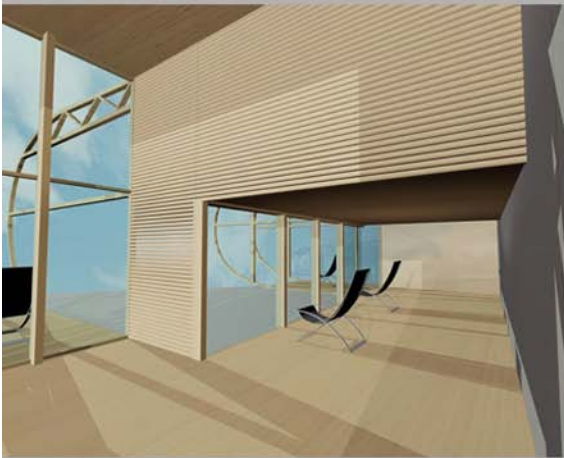
Final Design



View of the dining area for guests with private dining areas looking towards the landscape

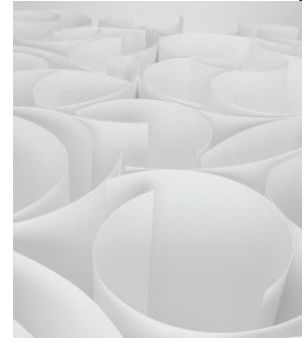
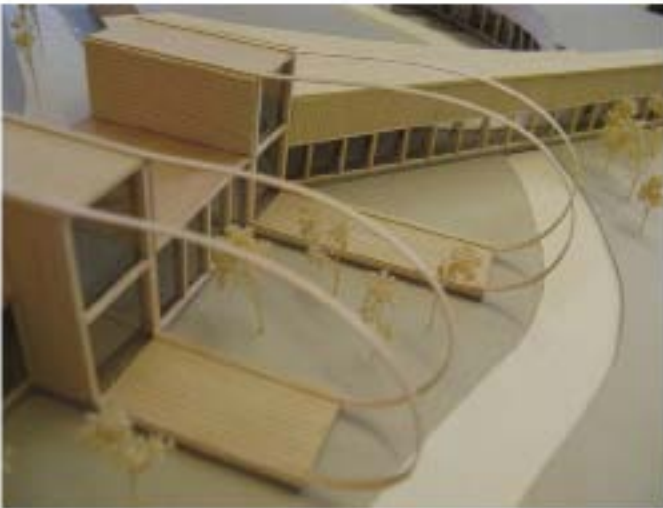
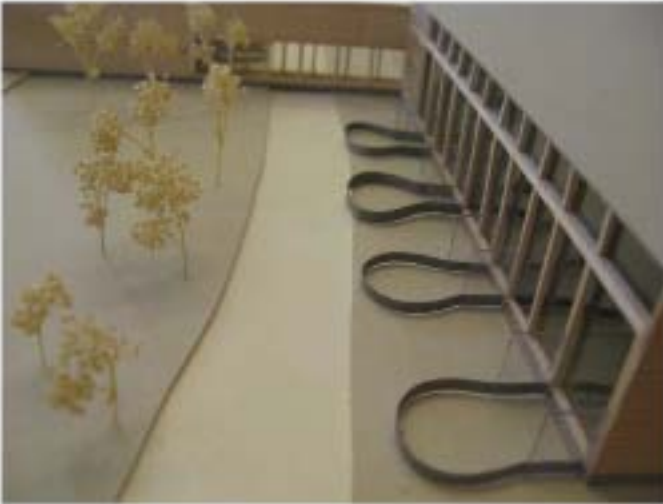


Perspectives



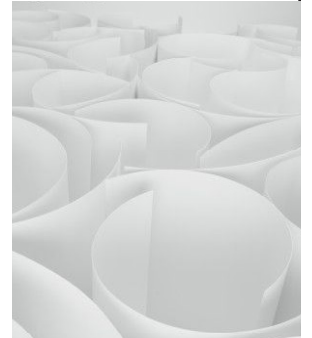
Relaxation areas situated along the water, encompassing the natural vegetation and views of light and landscape

Final Design



Model

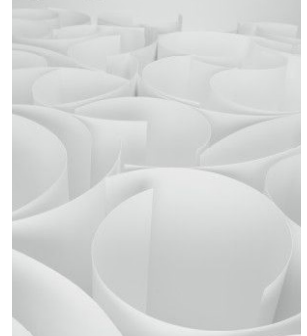
Final Design



Model

Ending Notes

The program is adapted from precedent wellness centers, retreats and spas. The program includes components for relaxation and stress management, psychological support, and finally space for inspiration, Imagination and optimism. As well, the spa demonstrates and exploration of public-private, an exploration of group activity and personal reflection. The generative concept was a exploration of the site. The openings in the building permit natural light to diffuse into the space as well as allowing for maximum views. The project balances the north and south compositions creating spaces that allow for the guest to enjoy the entire day regardless of the sun. The project, which allows light to glow through the facade, maintains a presence in the dark while forming character at sunset. An important aspect of the project is the sensitivity of form to site, as well as environmental impact. Both are subtle and responsive to the contextual implications through passive techniques and form. Materials fit the context of the surroundings. They coincide with the programmatic requirements on the interior.



Conclusion