



INNOVATION AND SOCIAL PEDAGOGICAL DESIGN

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INNOVATION AND SOCIAL PEDAGOGICAL DESIGN

A Design Thesis Submitted to the
Department of Architecture and Landscape Architecture
of North Dakota

By
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In Partial Fulfillment of the Requirements
for the Degree of
Master of Architecture

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May 2013
Fargo, North Dakota

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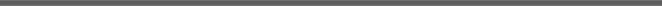
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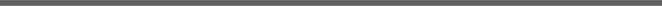
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abstract

This thesis provides some answers to the question, how can innovation and social pedagogy transform the way tourism is conceived, developed and practiced? The Typology for the examination of this problem is a hotel and restaurant. The site for this project is Block Island, Rhode Island. The Theoretical Premise/Unifying Idea that guides the research is, innovative pedagogical design that is experienced through exploratory and participatory involvement will change the demand for which tourism is conceived, developed and practiced. The Project Justification is, the tourism industry has a major impact on the economy, society, and the environment.



problem statement

How can innovation and social pedagogy transform the way tourism is conceived, developed and practiced?

statement of intent

statement of intent

PROJECT TYPOLOGY

Hotel and Restaurant

THE CLAIM

Innovative architectural design and social pedagogy can be used as a teaching tool for the emergence of a new social paradigm in the tourism industry.

Actors – tourism industry

Action – innovated architectural design and social pedagogy

Object – tourist

SUPPORTING PREMISES

The tourism industry sets the standard for sustainable, economical, and social-environmental practices in hospitality infrastructure. The standard is set from an educated society that demands for better, holistic design.

Innovated design and new technology, practiced as pedagogical theory, can educate the tourism industry and vacationers, transforming the social, economical, and environmental impacts for a better standard of hospitality.

The tourism and hospitality industry can create a standard that changes future development and practices to meet the environmental, economical and social needs of the region.

UNIFYING IDEA

Innovative pedagogical design that is experienced through exploratory and participatory involvement will change the demands for which tourism is conceived, developed and practiced.

PROJECT JUSTIFICATION

The tourism industry makes major impacts on the economy, society, and the environment. The environment, a key factor in tourism, can suffer great consequences resulting from irresponsible development, inefficient design, and unsustainable practices. The tourism industry is large enough, that if environmental sustainability were to become standard, it would create a positive global impact. Tourism is the driving force behind local economical stability and the welfare of indigenous people. The social equality becomes unbalanced when tourism only favors the “rich” and does not give back to the community. By finding innovative ways to educate the people that have the most influence on tourism, the tourist and industry leaders, can dramatically change the demand in hospitality, and change the associated impacts.

KEYWORDS

tourism
innovated design
sustainability
pedagogy

the proposal

narrative

A sense of place is vital to the well being of humans. Tourism has the opportunity to create a sense of place and a connection between what is known and unknown. For me, Rhode Island fills me with a sense of family, relaxation, and adventure. I have visited Rhode Island a dozen times, exploring the small state with family, friends, and lovers.

Block Island, Rhode Island is a spiritual land that evokes memories of my mother and I on our “mother and daughter bonding vacation”. I find solidarity on the Island, which is hard to find on the main land of New England. The Island sits 13 miles far from the mainland, making solitude truly isolation. Solitude for me evokes a sense of self belonging and a belonging to a landscape. One feels a rightness being in the landscape of Block Island, a knitting of oneself and nature. The ocean listens to those that speak, and the words are kept secret in the vastness of the open sea. The condition of clarity is fully present, and an artists’ mind develops inspiration that can not be found back in the Dakotas. The experience of Block Island is unique from other east coast towns. The intimacy with nature has soothed my soul in hard times, and the isolation makes me feel as though I have “escaped” the stresses of modern life. It is my happy place.

My parents, as college professors, give me the opportunity to travel the world intensively. From the time I was a small child they would take my siblings and I to conferences and lectures all around the world. Experiencing tourism of all kinds, from Super 8 Motels to five-star boutique hotels, gives a traveler an understanding of the quality that hospitality should strive towards. The greatest memories of vacations are the hotels that indulge their guests with design, food, and drink.

Hotels and restaurants are fascinating, and their changing trends depend on location and can vary greatly, which gives a new perception to visitors, new or returning. Architecture has an influence on the taste of the food that we eat and the activities in which we partake. The culture that surrounds a given hospitality infrastructure creates a sense of place beyond the built environment. The need to 'discover' is a human instinct that hospitality is designed to fulfill. Being relaxed is a human body essential; the notion of relaxation comes with the combination of architecture and nature. Humans travel for many reasons: to see new cultures, relaxation, gain knowledge, or to discover an unknown. Traveling is more than a hobby for most, it is a necessity that grows with change. The desire to travel has grown through the desire to see more, do more, and become more. It stimulates the mind and makes what was once unknown, known.

The environment, a key factor in tourism, can suffer the consequences resulting from irresponsible development, inefficient design, and unsustainable practices. The tourism industry is large enough, that if environmental sustainability were to become standard, it would create a positive global impact. Tourism is the driving force behind local economic stability and the welfare of the local people. The social equality becomes unbalanced when tourism only favors the wealthy and does not give back to the community. By finding innovative ways to educate the people that have the most influence on tourism, the tourist and industry leaders, can dramatically change the demand in hospitality, and change the associated impacts.

user/client description

There are three primary people that will interact with the hotel and restaurant: the owner, guests, and workers.

OWNER

The hotel and restaurant will be owned and managed by a local private investor.

GUESTS

The guests that stay at the hotel will be couples, families and individuals who are seeking a new experience in hospitality.

The restaurant guests will be local residents, guests at the hotel, and other tourists.

The visitors will be individuals that are attending conferences and events at the hotel and restaurant. They will come from all walks of life and will vary in age and occupation. Other visitors will include local residents and passerby tourists.

WORKERS

The hotel and restaurant will be operated and maintained by local resident workers. These workers will include the chef, kitchen staff, wait staff, bartenders, fishermen, grounds crew, event coordinator, reception staff, and custodial staff.

major project elements

RESTAURANT and BAR

The restaurant will serve local foods that are caught and grown on Block Island. There will be an on-site fishing farm and garden.

Cooks Kitchen
Bar
Fine Dining Area
Casual Dining Area
Outdoor Seating

HOTEL

The hotel will be a mid-rise building. The design will embrace guests with local materials and building methods.

Reception Area
Guest Rooms
Maid Closets
Indoor Spa/Wellness
Conference Room and Event Hall
Rooftop Patio

ON-SITE

The landscape will be of natural grasses and wildlife. There will be several relaxation areas for guests to immerse themselves in nature. A wildlife preservation path will provide individuals an education with an active activity.

Outdoor Pool
Outdoor Lounge and Bar
Wildlife Preservation Walking Path
Fishing Farm
Recreational Storage

site information

NORTHEAST REGION



Table 1.1

BLOCK ISLAND

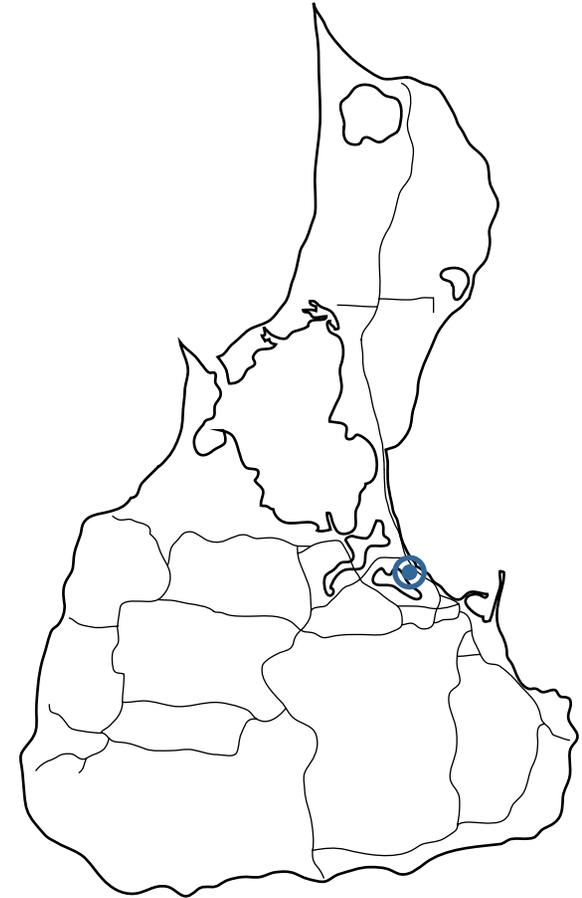


Table 1.2

SITE

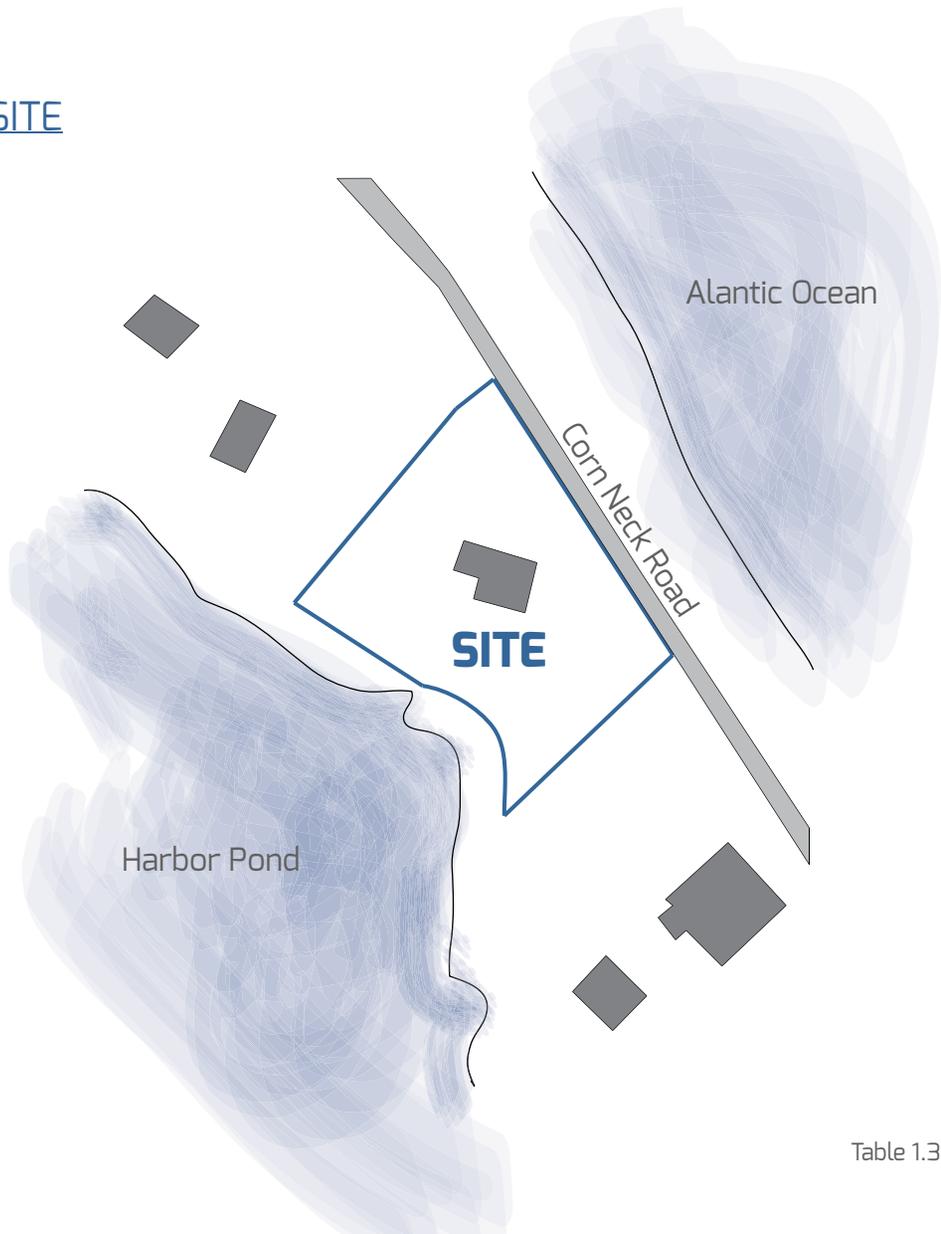


Table 1.3



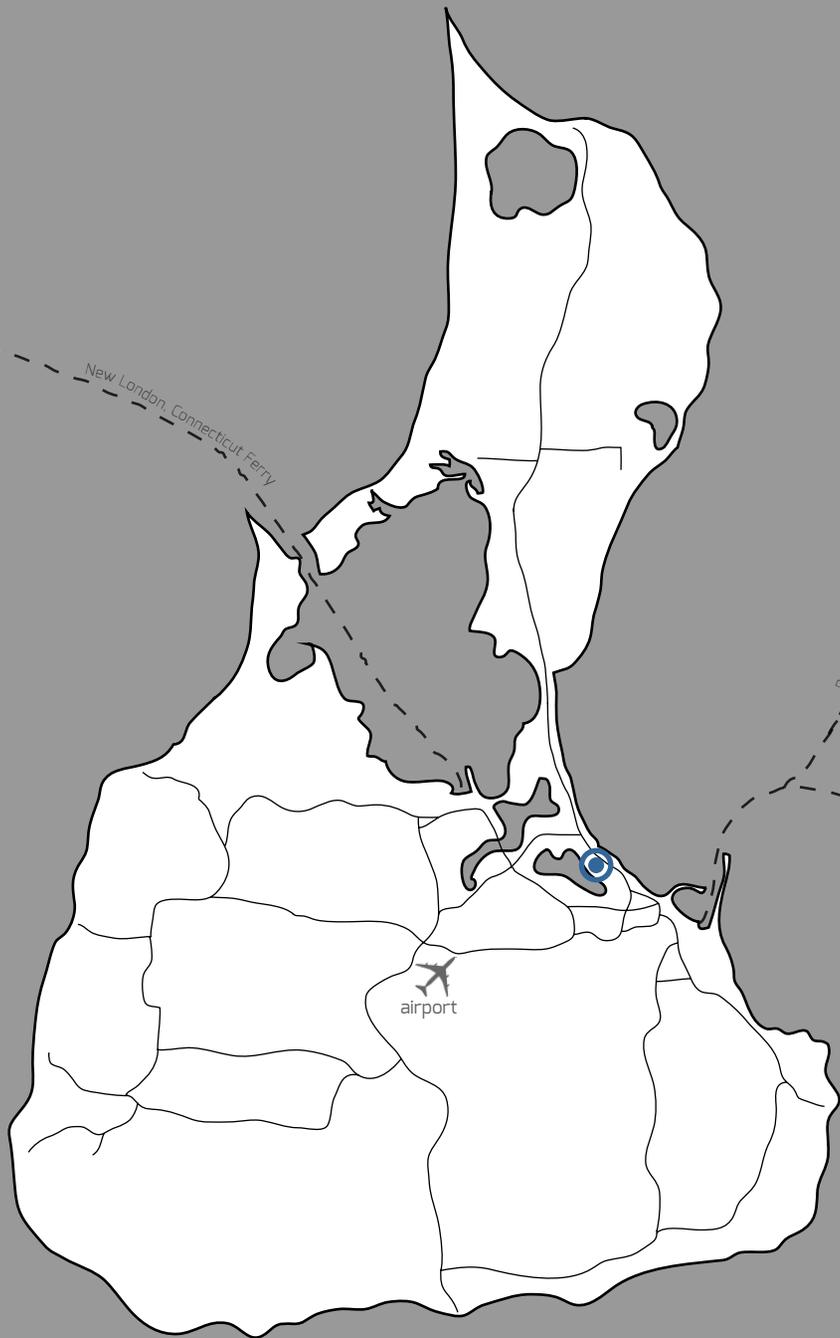
Photo by Block Island Conservancy



Photo by Block Island Conservancy



Photo by Block Island Conservancy



New London, Connecticut Ferry

Point Judith, Rhode Island Ferry

Newport, Rhode Island Ferry

Montauk, New York Ferry

airport

site information

REGION OF NEW ENGLAND

The site is located in northeast America, otherwise known as New England. This part of the United States is the most densely populated, with a population of over fourteen million and a combined area of 71,991 square miles. The landscape of the region is known for its jagged coastline, Appalachian Mountains and rolling hills.

BLOCK ISLAND, RHODE ISLAND

The site is on an Island that is 13 miles off the coast of Point Judith, Rhode Island and 14 miles off the coast of Montauk Point, New York. The island, originally native to the Narragansett people, was discovered in 1524 by French settlers. Since its discovery, the island has grown into a popular tourist destination, with up to 10,000 visitors a day during summer months. Common tourist activities include sailing, fishing, bicycling, hiking, and hangout at the beach. The population of permanent residents is 1,051, with the largest economic aspect being tourism. The geography of the island is diverse, featuring beaches, coastal bluffs, grasslands, and salt ponds. Block Island is home to unique wildlife and is land for many migratory birds. The Nature Conservancy protects 43% of the Island from development and harm against plants, animals and people.

THESIS SITE

The site is located slightly outside the town of New Shoreham. The land is an acre in size and located between Harbor Pond and Crescent Beach (Atlantic Ocean). There is currently a structure on the site that once was a restaurant in the 1950s, but has been unused for years and is in a state of deterioration.

landmarks



Mohegan Bluffs, located on the southeast side of the island, the cliffs reach 185 feet high. The cliffs are a popular area for tourist to sunbath, swim in the ocean, and admire the cliffs.

Figure 2.2a



New Shoreham, the only town on Block Island has 1,010 permanent residents. During the summer months the Island has 10,000 visitors and tourists per day on average.

Figure 2.2b
Photo by Archindy.org



Stacked Rocks, it is a tradition of visitors to stack rocks along the beaches.

Figure 2.2c



Southeast Lighthouse, built in 1874, is a National Historic Landmark and it still used as a navigational aid for incoming ships and ferries.

Figure 2.2d

project emphasis

This thesis project will focus on how architectural design can educate society on current social, economical, and environmental conditions. Ultimately, this pedagogical method will create a change in the standard perception of how tourism is conceived, designed and practiced.

This project will examine the holistic approach through the study of people, social economy, and environmental stewardship. The study of materials, methods, and technology will be used to better understand the applied practices of the future of tourism and what make a building net-zero.

a plan for proceeding

RESEARCH DIRECTION

Research for this thesis will be directed throughout the entire thesis project. Research will be conducted with a focus for a larger understanding of the theoretical premise/unifying idea, project typology, including further investigation of the site, existing building, historical context, and the programmatic requirements of the projects.

DESIGN METHODOLOGY

The methodology I will employ throughout the research and design will follow a mixed method approach. The mixed method approach will include quantitative and qualitative research and will be conducted using a concurrent transformative strategy. The implementation of this methodology will occur throughout the research and design process. The process of analyzing, interpreting, and reporting of results will occur throughout the research and will be presented in text, graphics, and video. The quantitative data will include statistics and scientific data. The statistical data will be gathered and analyzed, and the scientific data will be obtained through instrumentation and equipment. The qualitative data will be gathered from direct observation, local survey, archival search, and direct interviews.

DOCUMENTATION OF DESIGN

This thesis project will be documented continuously throughout the process of design. Biweekly papers/video will be created showing any work conducted during that time span including site video footage, drawings, sketches, models, research, and analysis. A physical copy and electronic copy of the design process will be organized in a binder that will be readily available for review.

schedule for spring semester

<u>TASK</u>	<u>WORK DAYS</u>	<u>DATES</u>
Project Documentation	88 days	1/9 - 5/10
Context Analysis	5 days	1/9 - 1/15
Conceptual Analysis	10 days	1/9 - 1/22
Spatial Analysis	15 days	1/11 - 1/31
ECS Passive Analysis	5 days	1/18 - 1/24
ECS Active Analysis	4 days	1/18 - 1/23
Structural Development	8 days	1/24 - 2/4
Context Redevelopment	5 days	1/18 - 1/24
Floor Plan Development	11 days	2/5 - 2/19
Envelope Development	14 days	1/21 - 2/7
Materials Development	11 days	2/14 - 2/28
Structural Redevelopment	10 days	2/15 - 2/28
Section Development	10 days	2/15 - 2/28
Midterm Reviews	4 days	3/5 - 3/9
Project Revisions	12 days	3/7 - 3/22
Energy Modeling	7 days	3/12 - 3/20
Renderings	24 days	3/13 - 4/15
Preparation for Presentation	7 days	4/5 - 4/15
Presentation layout	6 days	4/8 - 4/15
CD of boards to thesis advisor	0 days	4/16
Plotting and Model Building	5 days	4/16 - 4/22
All Exhibits installed on the 5th Floor	0 days	4/25
Thesis Exhibit	3 days	4/23 - 4/25
Final Thesis Reviews	6 days	9/27 - 10/4
Final Thesis Documentation Due	0 days	5/10
Commencement	0 days	9/27

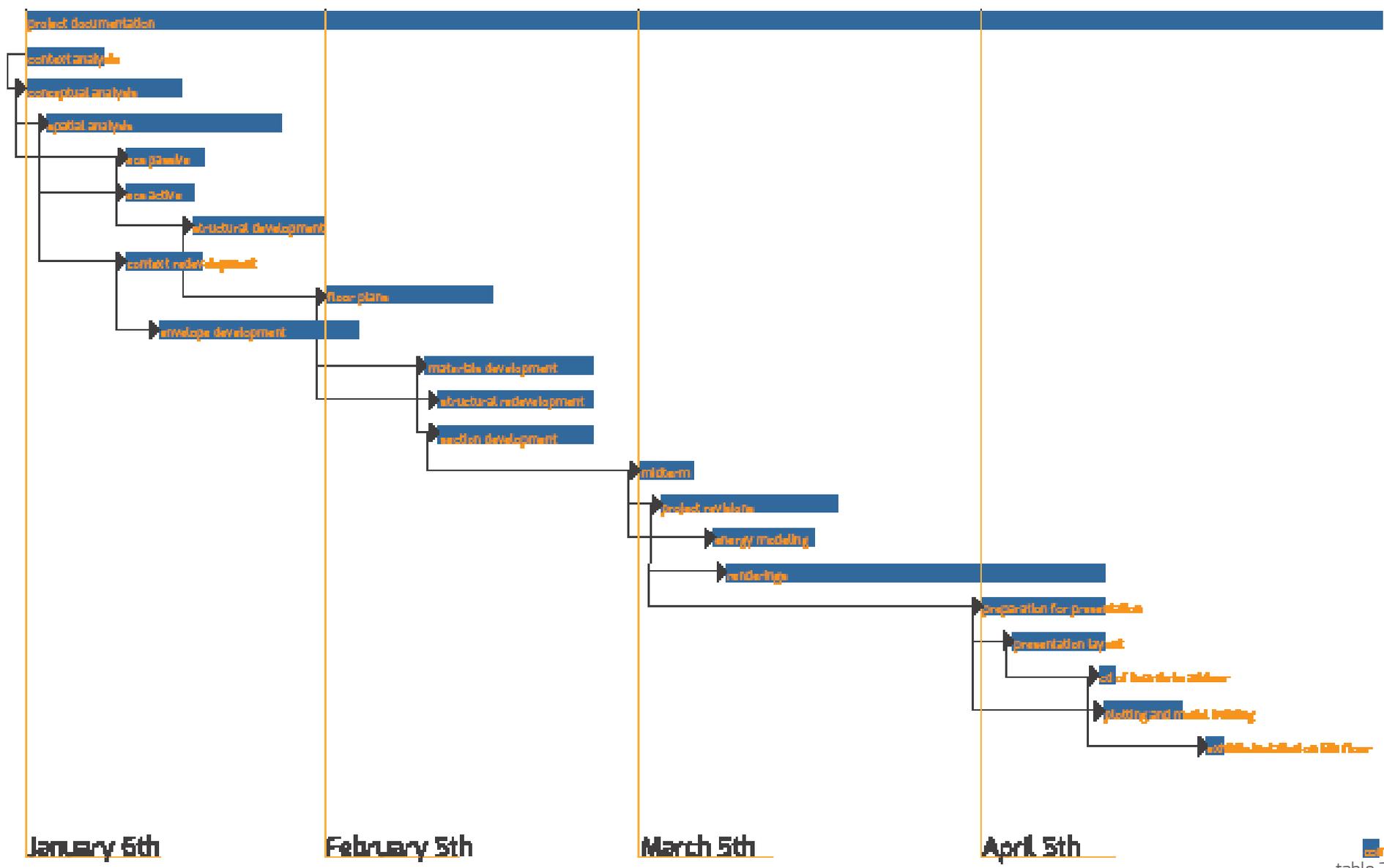


table 2.1

previous studio experience

ARCH 272 Design Studio I - Fall 2009

Stephen A. Wischer

Projects:

Tea House
Boat House

ARCH272 Architectural Design Studio II - Spring 2010

Darryl Booker

Projects:

Montessori School
Dwelling

ARCH371 Architectural Design III - Fall 2010

Cindy Urness

Projects:

Wellness Center
Food Cooperative

ARCH 372 Design Studio IV - Spring 2011

Mike Christenson

Projects:

Sixth Street Residence

ARCH 471 Architectural Design V - Fall 2011

Bakr M. Aly Ahmed

Projects:

Highrise
DLR Design Competition, Trash-to-Treasure

ARCH472 Architectural Design VI - Spring 2012

Don Faulkner

Projects:

Fargo Consulates
Urban Design of Kindred

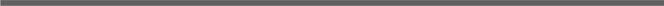
ARCH771 Architectural Design VII - Fall 2012

Regin Schwaen

Projects:

UND Museum Expansion

the program



unifying idea research

The inherent goal of this thesis is utilizing the given nature on Block Island and applying techniques that will shed light on the future of tourism. Tourism has an evolving definition that changes in time and culture. Tourism has shaped communities and provided exceptional experiences to visitors. Eco-tourism is defined, stated by the International Eco-tourism Society, “as responsible travel to natural areas that conserve the environment and improves the well-being of local people.” (TIES, 1990) The three aspects of eco-tourism are conservation, communities, and interpretation. Conservation is conserving and enhancing the bio-cultural diversity, and helping protect the natural and cultural heritage of our beautiful planet. Engaging communities is important for empowering natives to fight against poverty and achieve sustainable development. Visitor interpretation that enriches personal experiences and environmental awareness will promote a greater understanding and appreciation for culture, nature, and local community. The history of eco-tourism began in the 1950s. The concept was first introduced in Africa, and in the 1980s became more widely known and studied throughout the world. The importance of eco-tourism grows as people start to realize that it is important to preserve the environment. The awareness of sustainability and the curiosity of the exploration of the natural environment has the eco-tourism sector moving fast (International Eco-tourism Society, 2012). Industrial ecology, which is much like eco-tourism, has a perspective that offers the guest services a holistic view of its environmental impacts. Historically, environmentalism has meant “recycling”, but industrial ecology principles will encounter a host of obstacles culturally, institutionally, and economically that make them unique to the guest service sector (Auden, 2003).

unifying idea research

Architecture has a way of interacting with people that can change mind sets. Pedagogy, the science of education, has mainly been defined in school settings to help children and adults learn from experience. The term “Design Pedagogy” is defined as “the set of practices and systems for the training in the field of design; the way and methods of teaching for the acquisition of necessary knowledge and skills in order to practice the design profession.” (Artemis Yagou) The method of pedagogical design can proactively expand its defined term, “The need to accommodate the scale of change in professional practice with its new demands of requisite knowledge and skills presents this generation of design pioneers with a new challenge: to create a theory of architectural education and design pedagogy that acknowledges the scale and qualities of theoretical, professional, and technological changes that digitally mediated architecture is beginning to exert.”(Oxman,2007) For example, the LEED (Leadership in Energy and Environmental Design) rating system has created a standard by which buildings are designed, constructed, and operated to meet the needs that society and the environment demand. The LEED Rating System is a form of pedagogical design in terms of the built environment. Certification programs in the tourism industry, such as Green Globes, are used to distinguish genuinely responsible companies and services from those that are merely using “eco”, “green”, “sustainable” as a marketing tool to attract customers (Building Environmental Assessments, 2012). Pedagogical design can be practiced by taking an educational activity and transforming the theoretical motions into a unifying idea. Zehra Ersoy, author of ‘Building Dancing’: Dance within the Context of Architectural Design Pedagogy, states that “Current day approaches in design pedagogy focus on personal and bodily experiences of the subject and the need for investigating new ways and methods to enhance

awareness of spatial experiences is inevitable. In order to establish a heuristic understanding of embodiment in space within design pedagogy, collaborative studies of dance and architecture are important supports.” In the article Ersoy uses dance as the educational activity that theoretically designs architecture. The project is developed for students in architectural design and aims to integrate the existing knowledge under a holistic framework, Although, the study is not solely theoretical, but a transforming method for achieving a conception of reality and an understanding of architectural design pedagogy (Ersoy, 2011).

To change societies behavior public awareness of energy and the environment must be raised. Next, a culture of sustainability must be developed. This will require a different approach in standards and code application that extends into building operations. Achieving a standard as high as net-zero will not be easy and will require agreement on normalizing formula for weather, occupancy use and other factors. But once the behavior change occurs it will impact how buildings are designed, constructed, and maintained (Holness, 2011).

In the book Cradle-to-Cradle: Remaking the Way We Make Things, William McDonough asks “We see a world of abundance, not limits. In the midst of a great deal of talk about reducing the human ecological footprint, we offer a different vision. What if humans designed products and systems that celebrate an abundance of human creativity, culture, and productivity; that are so intelligent and safe, our species leaves an ecological footprint to delight in, not lament?” This is an important question when looking at the social-cultural sustainability of tourism. In the recent past,

unifying idea research

nature-based tourism has become dynamic and innovative. Besides the risk of endangering protected areas, there are potential benefits related to enhancing economic opportunity, the quality of life, and protecting natural and cultural heritage. Sociocultural sustainability can be divided into three perspectives: equal distribution of benefits between groups, value in cultural sustainability, and the opportunity for locals to participate in decisions affecting their livelihood. In local economic growth and benefits from tourism, care should be taken to ensure that the creation of public goods do not create a burden derived from loss of development that is cast upon local people. A solution lies in complementing the discursive approach with departures of material extraction. In this case, material extraction is the natural environment, wildlife, plant species, and minerals that are on the land. This would provide a holistic basis for analyzing the benefits and burdens of hospitality development in environments that contain national parks. (Puhakka, 2009)

Industrial ecology, which is much like eco-tourism, has a perspective that offers the guest services a holistic view of its environmental impacts. Historically, environmentalism has meant “recycling”, but industrial ecology principles will encounter a host of obstacles culturally, institutionally, and economically that make them unique to the guest service sector (Auden, 2003).

A key element of sustainability is that the design should be design, constructed and practiced in response to local environmental challenges and in harmony with the local surroundings. Some of the local conditions of Block Island required optimizing the sustainability of the site design are water pollution and the limited fresh water sources, which will need to be addressed in the design.

Water pollution is the discharge of raw sewage. It is critical on islands, such as Block Island, because discharges from the municipal systems can kill fish and close beaches. A sustainable building should also harness the local climate conditions and cycles to meet the building's environmental needs. The first step that needs to be taken in the design process is to conduct a climate analysis. The climate analysis can give important information to formulate an adaptive comfort analysis. An adaptive comfort analysis gives information to design buildings that provide conditions for human comfort through heating, ventilation and air conditioning systems fed by fossil fuel energy. Human comfort can be met through operable windows, individual thermal controls, proper building solar orientation, sun shading, and fan forced ventilation cooling. To achieve project goals the process must study local environmental issues, a detailed climate analysis and a site analysis, and follow a whole system approach to design. A whole system design approach is to analyze loads, target reductions, meet loads efficiently and to select renewable energy technologies to meet the reduced demand (Feucht, 2012)

A net-zero building is a building that has zero net energy consumption and zero carbon emissions annually. A net-zero building is the highest level of achievable sustainability. There are only a few buildings in the United States that can be truly acknowledged for being net-zero. Many parameters are taken into account when defining net-zero energy, such as what units of balance will be used, purchased energy, energy cost, primary energy, and CO2 emissions. An important consideration to designing a net-zero energy building is that the steps are more cyclical than sequential. Space design, temperature and airflow control, space heating loads via envelope improvements reduction,

unifying idea research

and operation are logical initial steps, but consideration towards energy storage and how to supply the management energy flows is critical (Tardif, 2011). The ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) AEDG (Advanced Energy Design Guides) series had been successful in guidance for a 30% energy efficiency improvement since the earlier Standard 90.1-1999. The intent of the AEDGs is to lead the way in providing design guidance for energy efficient buildings, although an AEDG series to achieve net zero energy building is not yet completed. ASHRAE has identified NZEB (Net- Zero Energy Buildings) as buildings that annually use no more energy than is provided by on-site renewable energy sources. According to ASHREA, a net-zero building can only be obtained by fully integrating design and construction approached, as addressed:

- “
- Building orientation to suit climate zone;
 - Coordination siting, landscaping and building location;
 - Highly insulated building envelope;
 - Optimized high performance fenestration;
 - Optimized use of daylighting;
 - Low density ambient lighting (electronic dimmable);
 - High efficiency task lighting (occupancy control);
 - Control of plug and process loads
 - Dedicated outdoor air systems w/enthalpy recovery;
 - Super efficient HVAC systems;
 - Expanded use of heat pumps;
 - Radiant heating and cooling systems;
 - Consideration of renewable energy; and
 - Ongoing commissioning, operations and maintenance.”
- (Holness, 2011)

Adriaen Block visited a tiny island off the coast of Rhode Island in 1614, which was thus named Block Island. The island was conquered twenty years later by colonist in a bloody battle with the local Pequot Indians. In 1672, the town of New Shoreham was built, which still exists today. The island was not always a tourist destination, during the seventeenth and eighteenth century the people of Block Island lived self-sustaining lives, growing crops and fishing to accommodate everyday needs. Tourism hit the Island in the mid-1800s, when the invention of steamboats made it possible to bring residents of large mainland cities out for fresh air and sunshine. Tourism had hit the Island, with hotels sprawling the island. The economy became dependent on tourism and fishing became a hobby for the tourist. Today Block Island remains a tourist attraction. The pace is slow and the island is known for being relaxed, with a strong sense of community. (History of Block Island, 2012)

Over 15,000 years ago the movement of the glaciers created the geography of New England. Block Island was created by the Wisconsin glacier moraines, piles of rock pushed up along the glacier. The moraines formed piles as high as 200 feet, which now make up Block Island, Nantucket and parts of Long Island. The historical influence on the landscape vegetation dates back 12,000 year ago, when the Native Americans occupied the Island. The native people of the Island were primarily hunter-gathers and little farming occurred. It was 450 years ago when larger, semi-permanent camps (Native American) became coastal settlements. Villages, such as Old Shoreham, were established. During that time, maize horticulture became the crop of choice and much natural vegetation was cleared by burning or cutting. In the early 1860's the European settlements exponentially increased the

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transformation of forests to agriculture. During the mid-nineteenth century, roughly eighty-five percent of New England was cleared from forest to fields. The present day natural disturbances include natural disasters, such as hurricanes and snow/ice storms. Block Island acts as a coastal barrier to the mainland. This causes an overwash of beaches and breaching of coastal ponds. Overwash and currents are mechanisms transporting sediment along the barrier beaches (RI CRMC, 1998).

Block Island is a special place to humans and wildlife. In 1973, the U.S. Coast Guard created the Block Island National Wildlife Refuge. The refuge is contained in 156 natural acres on the Island. Despite the Block Island Refuge owning half the land on Block Island, the effect of poor, unsustainable development threatens the Island and its wildlife occupants. The Comprehensive Conservation Plan that the Block Island Refuge has developed provides a holistic direction in terms of wildlife and nature on the Island. The need to find protection for endangered species is the most important issue pertaining to wildlife. The Piping plover is one of the most endangered species on the Island, mainly because of human interaction. Coastal development, disturbance by humans and pets, and predation are the major factors contributing to the species decline and is a large threat to the natural environment. (CCP, 2002). According to the Block Island Refuge CCP, protecting the wildlife will require intensive efforts of monitoring nesting sites, managing public access on beaches, and providing educational information to residents and visitors. The key issues of Block Island wildlife, according to the Block Island Refuge CCP – May 2002: the repair and maintenance of coastal sand plains, including grasslands and shrub-lands that are less than 60 years old; the protection and repair of the beach line ecological community; the control of

non-native, invasive, or overpopulated plant and wildlife species; the protection of biologically significant areas through cooperative management; the assurance of access to credible educational information regarding the Refuge Complex to guarantee management decisions are based on the best available science; the management of public use and access; the opportunities for environmental education; the provision of staffing, operations, and maintenance support sufficient to accomplish goals and objectives; the need for improved facilities. (CCP, 2002)

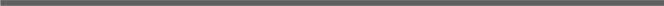
unifying idea research summary

Block Island is a destination that people from all over the world come to, to relax, immerse in nature, and for a new experience. Over 40% of the Island is conserved land and luckily the Island's natural beauty and bounty has been preserved. Conservation is an extensive effort of the islands residents, and a continual process. The research first looked at eco-tourism as an avenue for design of buildings and outdoor environments of hospitality infrastructure and communities. Next, the research explored the idea of using pedagogy in architectural design, as a way to teach visitors about sustainability and equality. The visitors would experience a new way of design, construction and operations that they learn, that teach and demand new standards in building design. The research then looked at innovative techniques, such as net-zero and energy efficiency standards, that have potential of changing the design and construction of hospitality infrastructure. To truly understand the need of Block Island, one must have the knowledge of what hospitality means to the people. Hospitality and the formation of the hospitality industry over time.

Ecotourism is a relatively new idea to the hospitality industry. It goes beyond looking at just the foot-print of a building, but how a particular building affects the community and environment. Eco-tourism and net-zero have similar unifying ideas, although eco-tourism is more broad. Eco-tourism supports the unifying idea as an innovative design practice that is being demanded by societies. Pedagogy, the teaching of knowledge and skills in the design profession, has been a driving force behind the eco-tourism movement. As net-zero design is just starting to become a new way of thinking of design, pedagogy will be necessary for its success. As consumers and professionals learn the benefits of net-zero they will teach others. LEED is a pedagogical rating systems

that, at a minimum, should be followed in the design of the thesis. It will be important that the thesis incorporates pedagogical design in innovative recreational activities, material choices, and the movement through spaces. The embodiment of spaces can teach individuals on a personal level, allowing all visitors to self-teach on issues important to Block Island. The research on net-zero and energy standards gives a good understanding of how to reach building efficiency that will be required in the thesis project. Passive design will be the first approach in making a net-zero building. Active design, such as renewable energy and efficient HVAC system, will be designed as needed. Special attention will be paid to the relationship between aesthetics and net-zero design of this thesis project.

The definition of hospitality on Block Island has changed over time, and hospitality has changed Block Island. With the population tripling in the summer months, the Island is affected greatly by the visitor, socially, economically, and environmentally. The research on Block Island will play an important role in the thesis design. It will be a requirement to not only meet the needs of the Block Island Refuge, but exceed them by giving more back to the community. The major issues that will need to be addressed are the repair and maintenance of coastal sand plains; the protection of biologically significant areas through cooperative management; the assurance of access to credible educational information regarding the Refuge Complex to guarantee management decisions are based on the best available science; the management of public use and access; the opportunities for environmental education; and the provision of staffing, operations, and maintenance support sufficient to accomplish goals and objectives.



typological research

Endemico Resguardo Silvestre

by graciastudio

Valle de Guadalupe, Ensenada, Mexico



Photo provided by Archdaily

Table 3.1

typological research

Endemico Resguardo Silvestre

by graciastudio

Valle de Guadalupe, Ensenada, Mexico

The Endemico Resguardo Silvestre is located a hour and a half from San Diego, California, in the heart of Mexico's wine country. The area has several old fishing and mission towns, offering a blend of modern and traditional Mexican culture, creating an exciting artistic and cultural melting pot of activities. The site consists of two main building components: the Encuentro Guadalupe, the restaurant and winery; and the Endemico Resguardo Silvestre, twenty high-end hospitality bungalows. The restaurant and spa is located a short distance from the bungalows. The layout and accommodations of the buildings allows guests to immerse themselves into the natural environmental but still enjoying modern comforts. The bungalows were designed to not interfere directly with the land, and respect nature in every opportunity possible. The twenty bungalow are 20 square meters in size and have unobstructed views of the valley. The main materials used were Corten steel and wood. The materials were intentionally designed to weather over time, eventually camouflaging the buildings seamlessly with the hills on which they are perched. The steel structure was chosen because of the availability of steel in the region and the clean skeleton appearance that achieves harmony between nature and the built environment. The individual bungalows come from the design concept of "deluxe" camping. Each bungalow is furnished with sleek furnishings: a king size bed, technology, and a private terrace with a Mexican outdoor kiva. Each room provides guest with the basic needs, yet allows contact with nature and the environment to give the feeling of isolation and relaxation. (ENDÁMICO, 2012)

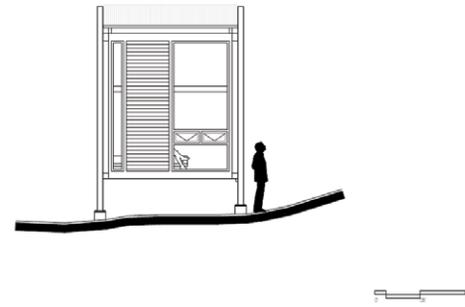
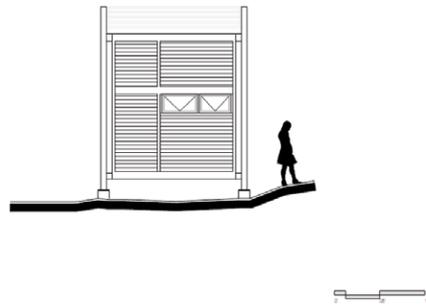
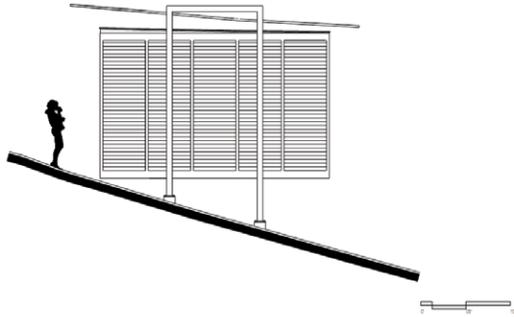
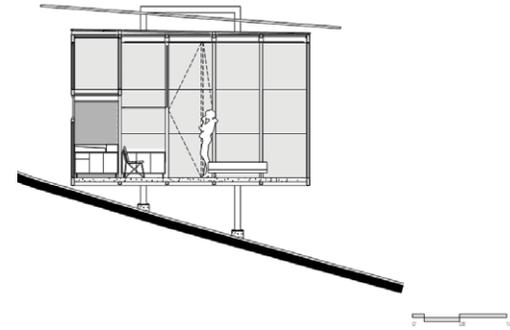
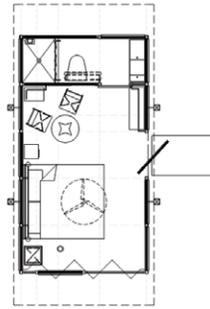
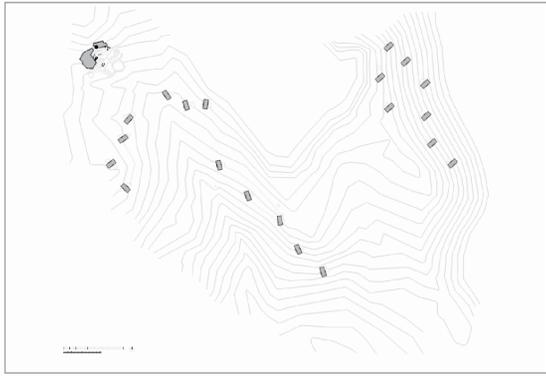


Table 3.2

typological research

Endemico Resguardo Silvestre

by graciastudio

Valle de Guadalupe, Ensenada, Mexico

The designers describe the mission of the hotel as “Our mission is to impose a certain philosophy on society. We are not here only to create hotels; we are here to make people understand that creativity is good for society. We don’t build hotels. We build experiences.” (Couturier & Micha, 2012)

The design of the Endemico Hotel is unique from the other case studies and traditional hotels. Instead of one structure containing all amenities, several structures are scattered alongside a hilltop, providing seclusion and adaptivity with the natural environment. The Endemico provides less amenities than the other case studies, but allows visitors to interact more with the land. This case study is similar to Bama Eco Resort because they both play an important role in giving emphasis to the natural environment by becoming one with nature, and leaving the smallest developmental impact from the built environment as possible. The minimalist design supports the unifying idea through the innovated, yet simple, design and layout of the bungalows. The hotel was developed and is practiced with holistic design in mind. The built environment sets a standard in sustainability by leaving a minimal footprint in the land. The hotel teaches visitors about the beauty of nature through exploratory and participatory involvement with the land. This case study has taught me to take into consideration the building footprint and a design that lets visitors interact significantly with the environment.

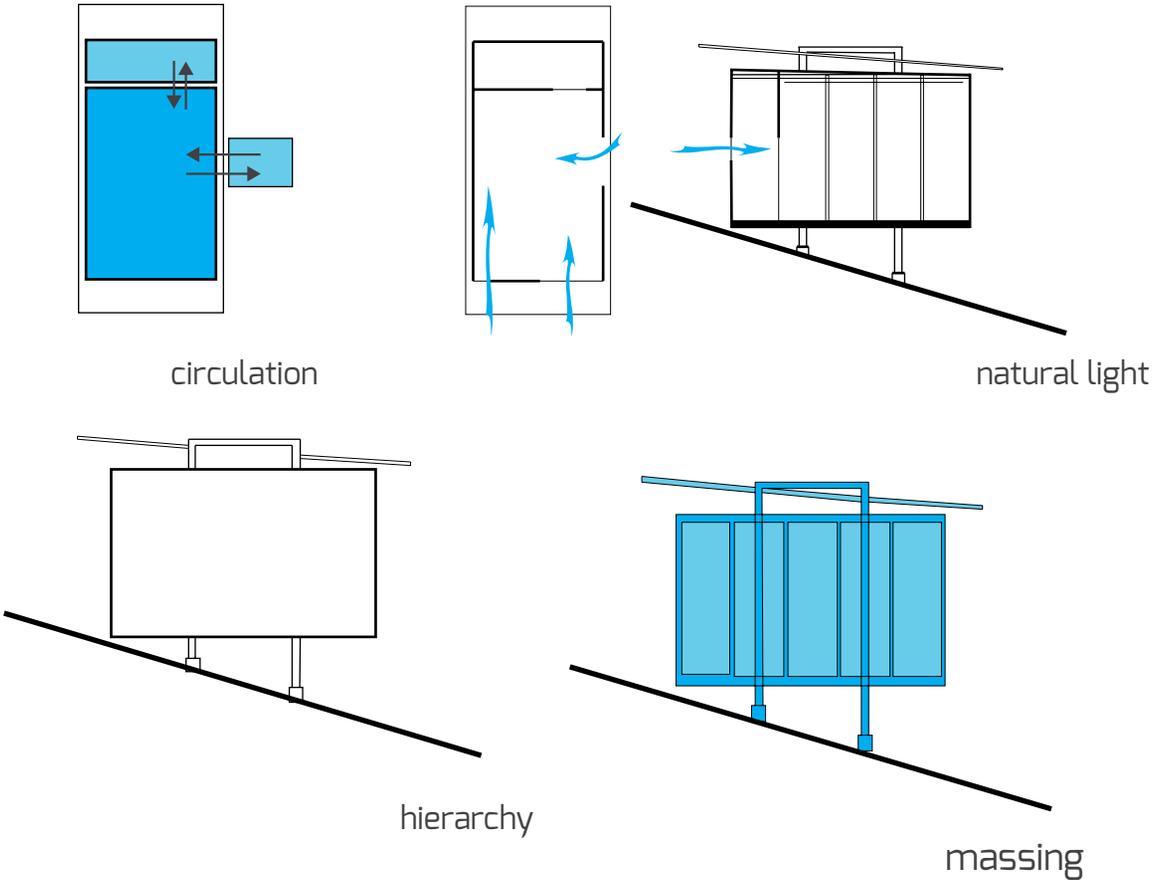
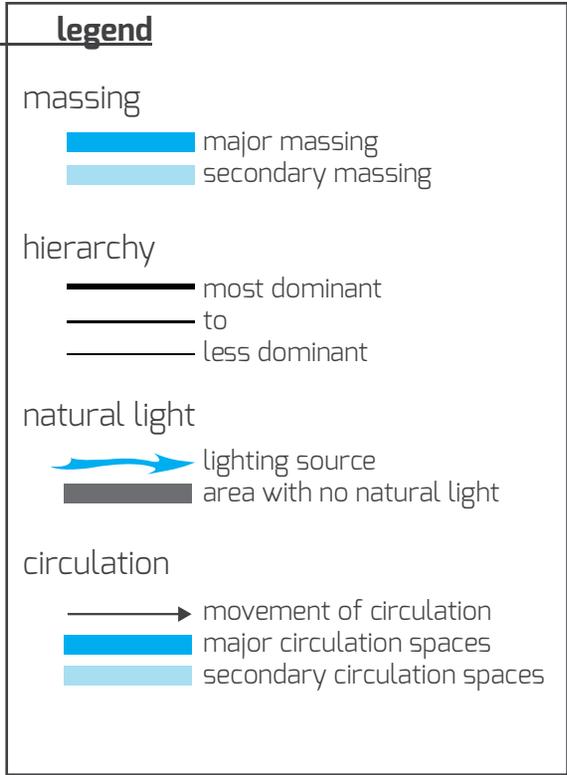


Table 3.3

typological research

Endemico Resguardo Silvestre

by graciastudio

Valle de Guadalupe, Ensenada, Mexico

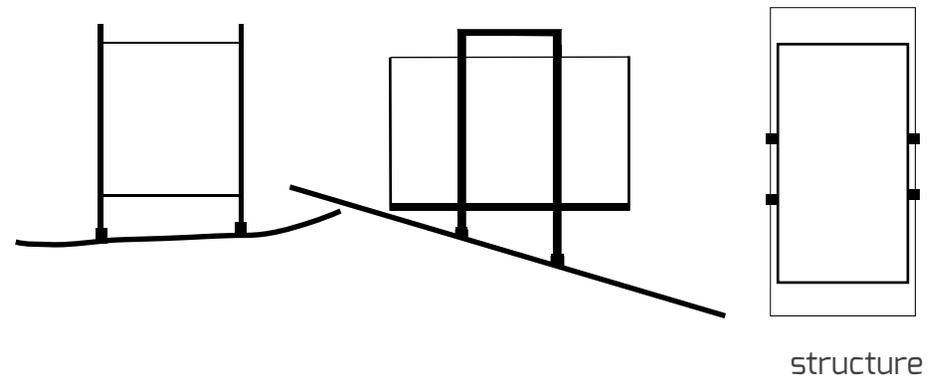
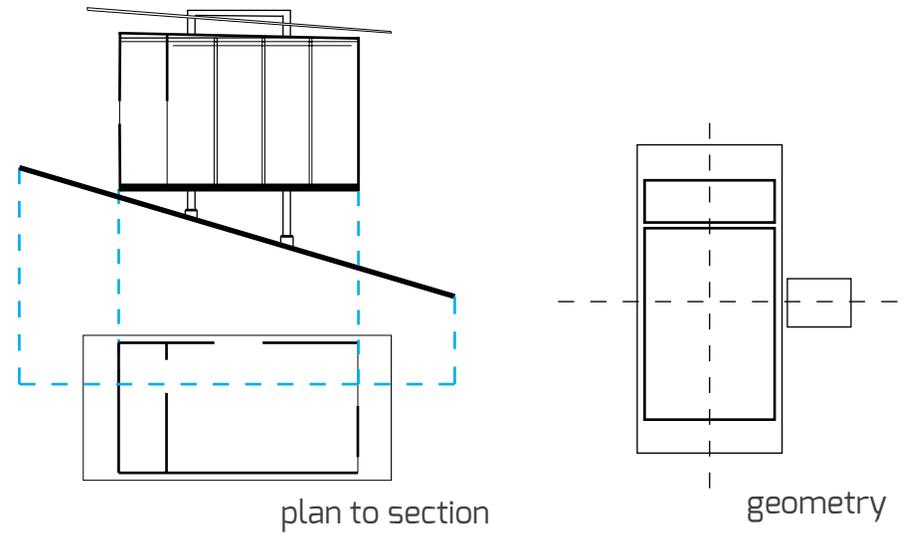
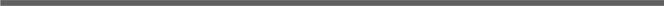


Table 3.3



Table 3.4

All photos provided by Archdaily



typological research

Bama Eco Resort

by davidclovers

Bama, China



Photo provided by Archdaily
Table 3.5

typological research

Bama Eco Resort

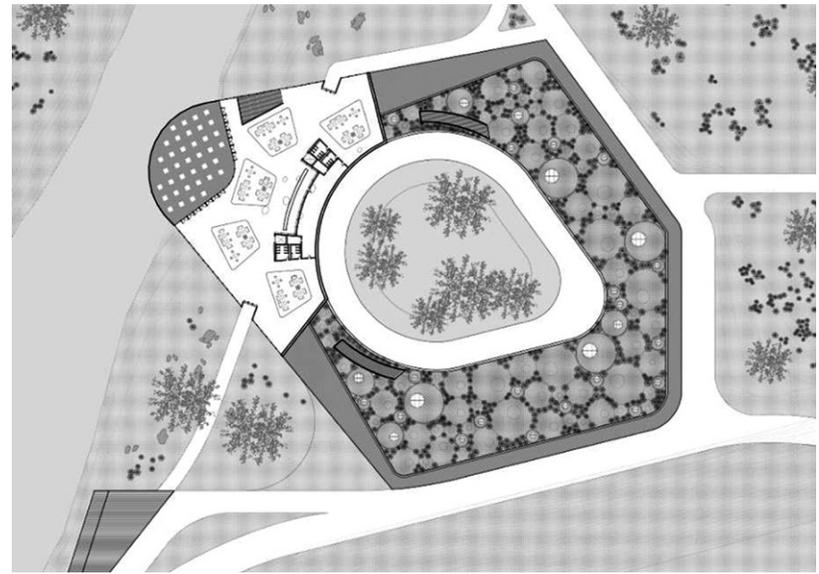
by davidclovers

Bama, China

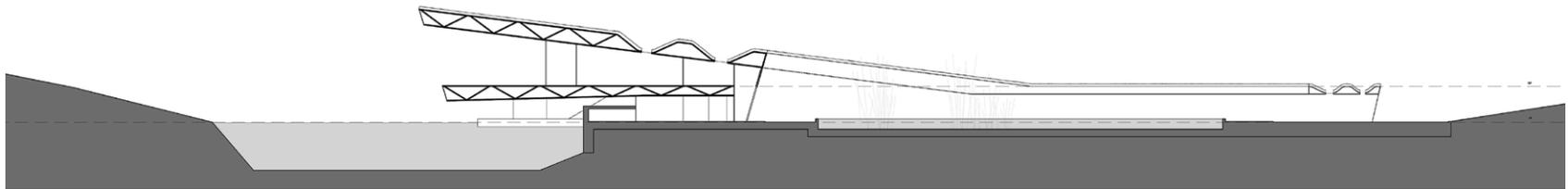
The Bama Eco Resort is unbuilt, but was meant to be built in Bama, Guangxi, China. The project demonstrated how architecture can simultaneously re-work and economically reinvigorate environmentally sensitive sites. China intends to use the eco-resort as a flagship project for the future of hospitality in the country. The goal of this project was to use both innovative construction methods and design processes to create a new standard in sustainability in the hospitality industry. Most of the building is buried below ground, and cars and buses are required to arrive and be stored underground around a large bamboo light well and water collection pond. The building is covered in cladding using a custom terracotta tile that is intended to blacken over time. The Bama Eco Resort has many innovative sustainable features, including earthen disc-skylights, a “native habitat garden” through skylights, gray water reuse, stormwater management, and recycled materials use. When tourists arrive they see glimpses of the potential landmark and tourism in the building below. Along with hospitality, the Bama Cave will showcase various exhibitions and retail outlets. The check-in for hotel guests cantilevers over the river, immersing guests into nature and senses of the water. Guest take a boat ride to the hotel, adding an innovative experience. The source of water has differing speeds, depths, colors, and textures that add experience to the boat journey. The landscape plays a large role in the overall design of the hotel: sprinkling landscape, lighting, thermal baths, and small changing rooms allows visitors to interact with the landscape. (Archdaily, 2012)



site plan



plan



section

Table 3.6

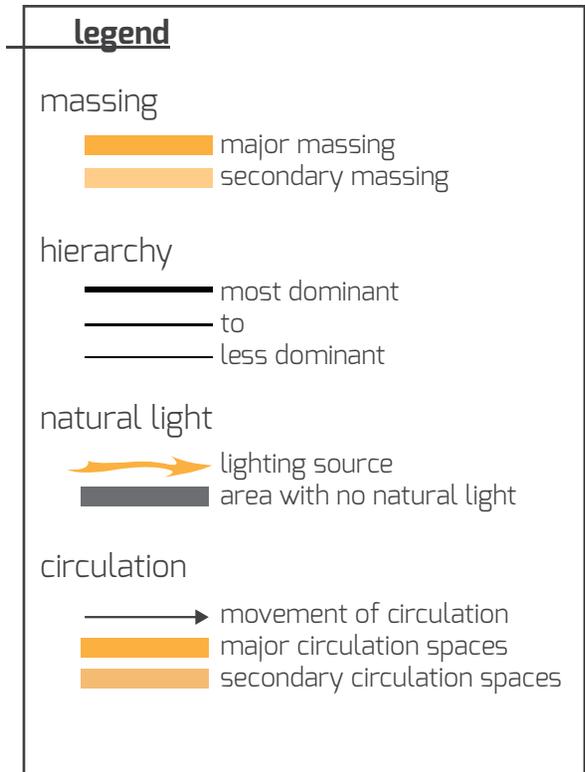
typological research

Bama Eco Resort

by davidclovers

Bama, China

Although unbuilt, the Bama Eco Resort is paving the standard in hospitality through innovative design, material use, and technology. This case study is different from the other case studies because it is unbuilt, and instead of leaving a minimal footprint on the land, it emerges itself into the land. I find that the project reflects thoughtful research and innovative capabilities. The Bama Eco Resort contributes to the Unifying Idea, "Innovated pedagogical design that is experienced through exploratory and participatory involvement will change the demands for which tourism is conceived, developed and practiced" in almost every way. Pedagogical design is demonstrated in the daily activities that would take place at the Resort, visitors will learn of a new structure in design as they experience the Bama Eco Resort. Hotel visitors experience the buildings structural integration through an exploratory, yet required, boat ride to the hotel. The Bama Eco Resort is a new standard in hospitality, that if built, can change the demand that the hospitality is developed and practiced. This case study will affect the development of my thesis project, helping me understand the methods in which a project integrates basic elements, such as ceilings, windows, lighting, and structure, to create unique ways in affecting space, program and inhabitation.



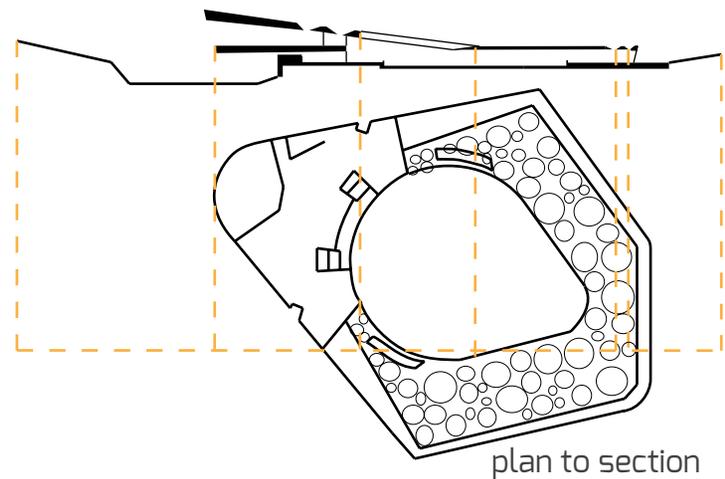
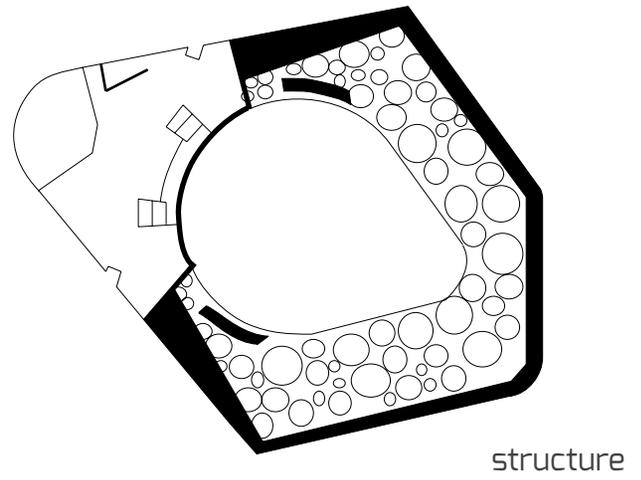
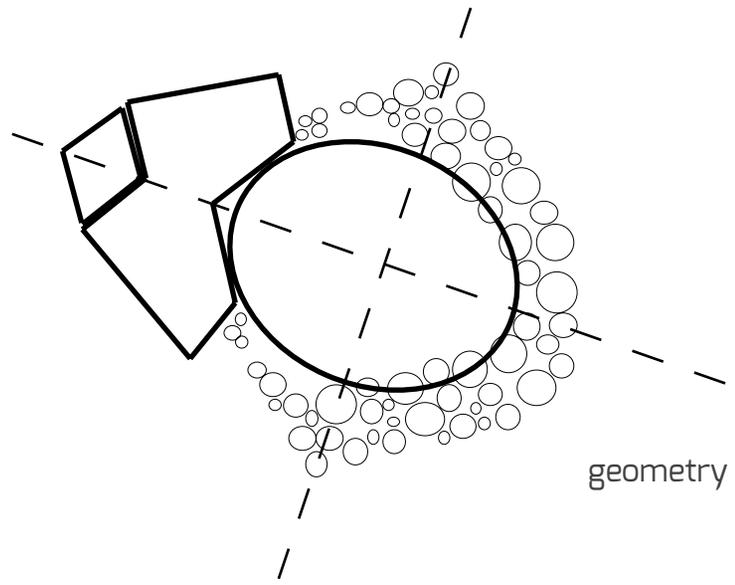
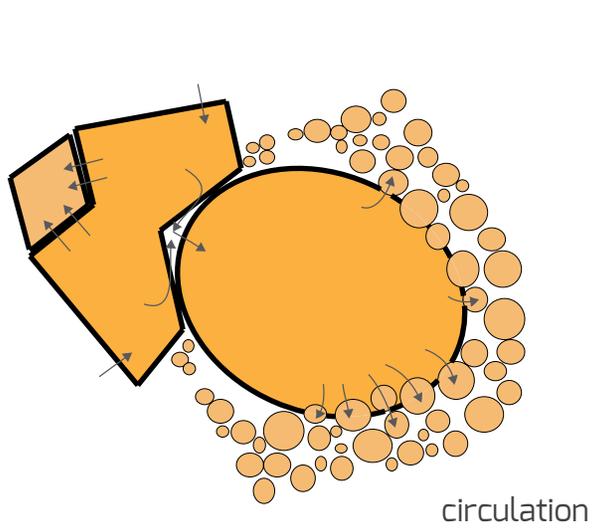


Table 3.7

typological research

Bama Eco Resort

by davidclovers

Bama, China

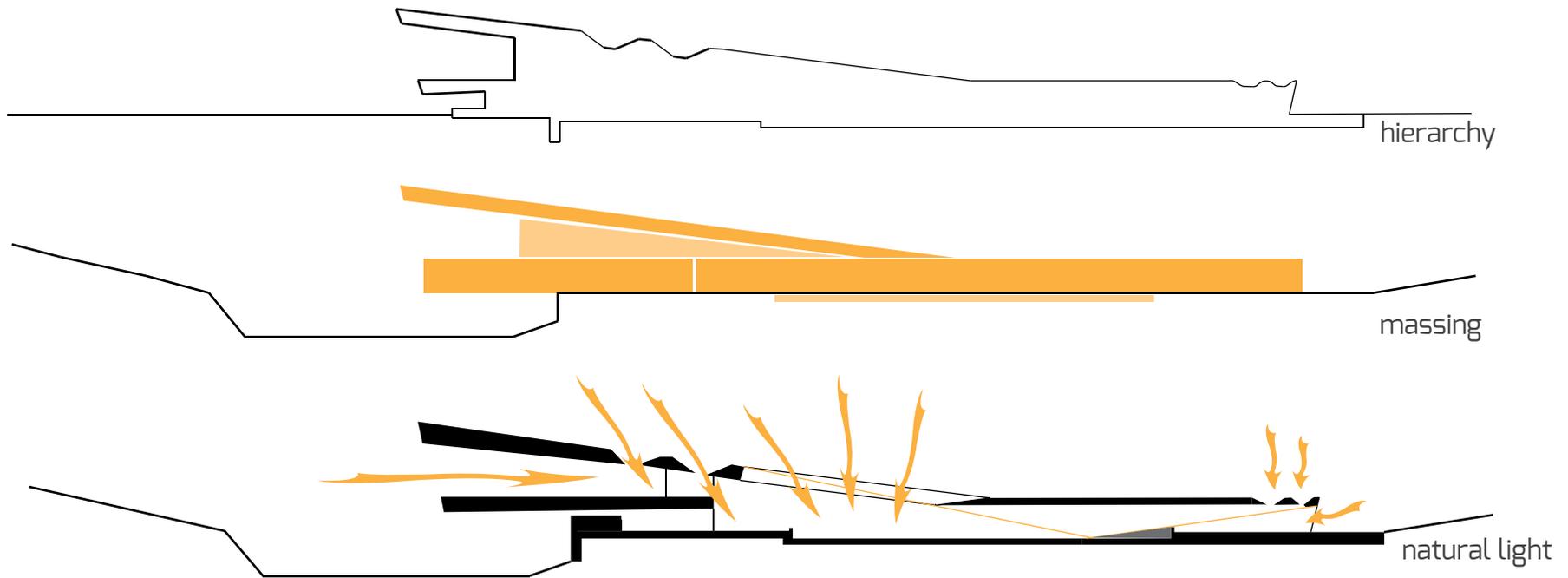


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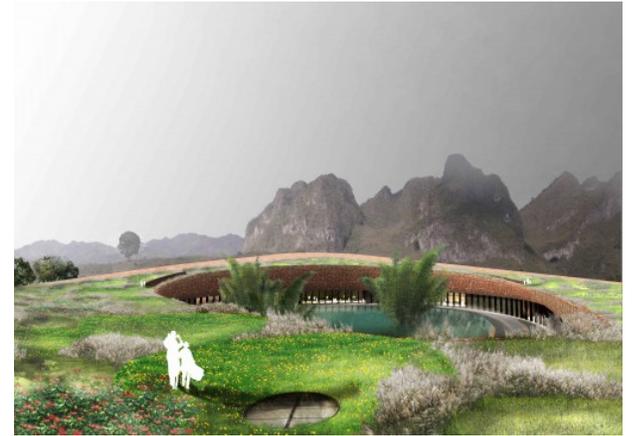
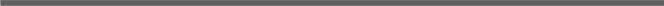


Figure 3.8

All photos provided by Archdaily



typological research

Miura Hotel

by Labor 13

Celadna, Czech Republic



Photo provided by Archdaily
Figure 3.9

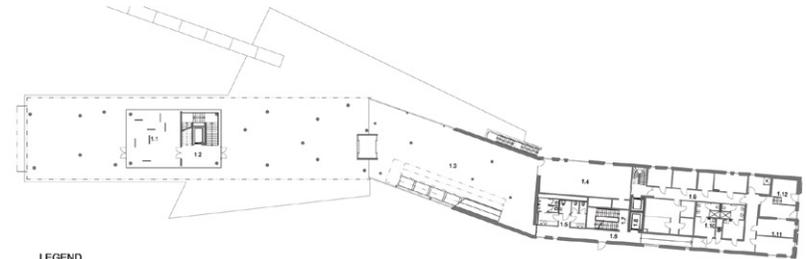
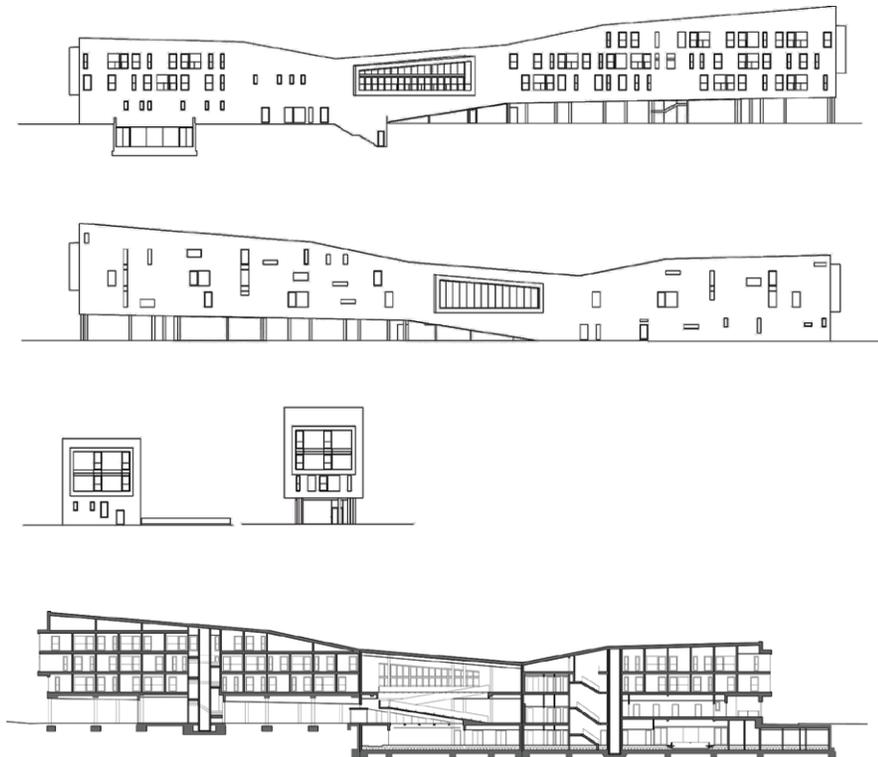
typological research

Miura Hotel

by Labor 13

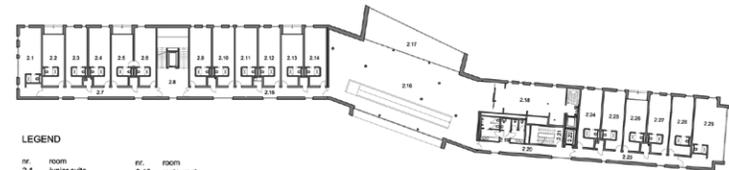
Celadna, Czech Republic

The Miura Hotel is located in the Czech Republic, surrounded by the Beskydy Mountains. The architectural style of the neighborhood is not uniform, and most buildings are uniquely eclectic and could be considered controversial. The design has a sophisticated connection between design, art, graphics, and architecture. The distinctive massing is inspired by the surrounding hills, creating an element that fits perfectly into the environment. Openings frame views of the landscape and allows the outside to come inside. The design gains inspiration from sculpture, art, and graphics. The linear movement through the hotel is smoothly connected with concrete ramps which are open to the outside, yet protected by glass. The idea of the nontraditional form was supported by lifting the part of the hotel on piles so there is a view throughout the hotel and the scenery is revealed. The construction uses natural materials – concrete, glass, stone, and plate iron. The color scheme is shades of grey, black, and white with contrast of magenta (Archdaily,2012). The building is divided into three parts: the hotel rooms located on the west side levitate above the ground, the hotel rooms on the east side, and the central core. All the hotel rooms have south views to take advantage of passive design, and have incredible views of the surrounding mountains. The central core consists of the reception area, lobby bar, south terrace, night bar and restaurant, and the south balcony. The lower level has two conference rooms and the Miura Spa. (Miura, 2012)



LEGEND

- | | |
|------|----------------------|
| nr. | room |
| 1.1 | sport gear storage |
| 1.2 | staircase, elevator |
| 1.3 | reception, cafe, bar |
| 1.4 | lounge |
| 1.5 | toilets |
| 1.6 | corridor |
| 1.7 | staircase |
| 1.8 | elevator |
| 1.9 | kitchen facilities |
| 1.10 | employees facilities |
| 1.11 | offices |
| 1.12 | freight area |



LEGEND

- | | | | |
|------|---------------------|------|--------------|
| nr. | room | nr. | room |
| 2.1 | junior suite | 2.16 | restaurant |
| 2.2 | room | 2.17 | terrace |
| 2.3 | room | 2.18 | kitchen |
| 2.4 | room | 2.19 | toilets |
| 2.5 | room | 2.20 | corridor |
| 2.6 | room | 2.21 | staircase |
| 2.7 | corridor | 2.22 | elevator |
| 2.8 | staircase, elevator | 2.23 | corridor |
| 2.9 | room | 2.24 | room |
| 2.10 | room | 2.25 | room |
| 2.11 | room | 2.26 | room |
| 2.12 | room | 2.27 | room |
| 2.13 | room | 2.28 | room |
| 2.14 | room | 2.29 | junior suite |
| 2.15 | corridor | | |

Figure 3.10

typological research

Miura Hotel

by Labor 13

Celadna, Czech Republic

The Miura Hotel was on the CNN Travel 11 New Hotel Wonders of 2012. The hotel is described as “Rising like a geometric spaceship in the Beskydy Mountains”. The relationship that the hotel has with the community is strong, with an impressive art collection, including works by Andy Warhol, Damien Hirst, and Czech sculptor David Cerny. There have been several large-scale art installation, including art that has incorporated the architecture of the building into the art installation. (CNN, 2012)

“The entire hotel is literally riddled with art, like no other hotel in the world. As you walk through the hotel you come across art in places where you perhaps would not even expect it...” (Miura, 2012)

The Miura Hotel is different from the other case studies because it largely incorporates art and graphics into the architecture and interior design. The hotel is apart of an artistic community, unlike the other case studies. The similarity of the case studies is the importance of the site and providing a connection between the natural environment and the architecture. The Miura Hotel case study is an innovative approach to hospitality through the artistic approach. It makes me question, how can a building be artistically aesthetic and work sustainably? In this case study, artists have a major role in the innovative design through exploratory and participatory involvement, but a traditional visitor would not. The artistic approach to the design has inspired, and will influence my design and unifying idea to have an emphasis in aesthetics.

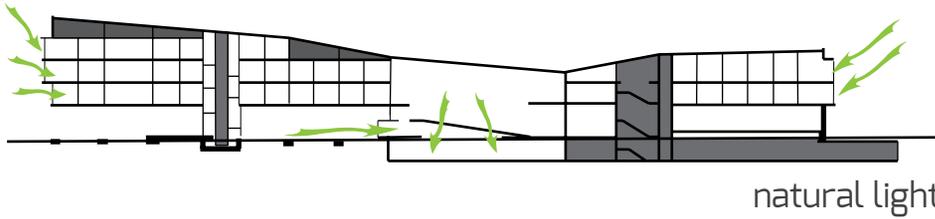
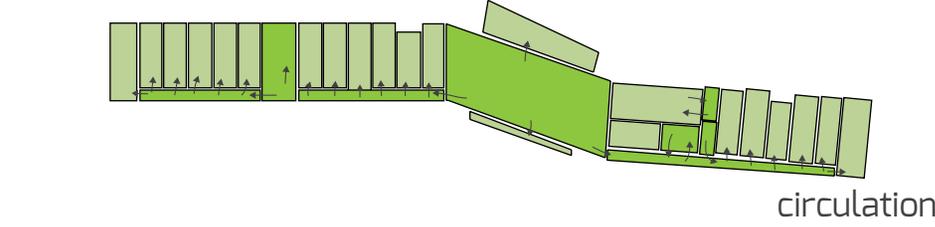
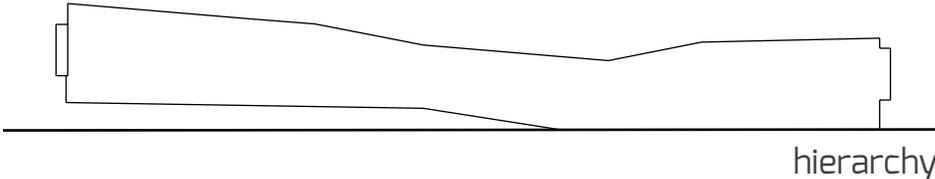
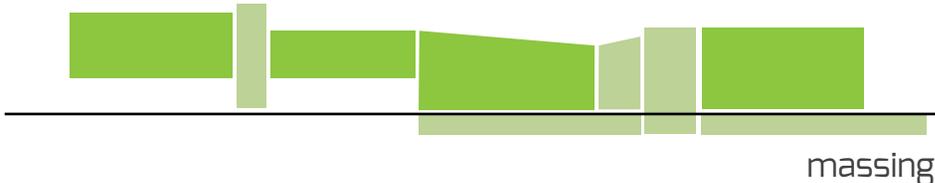
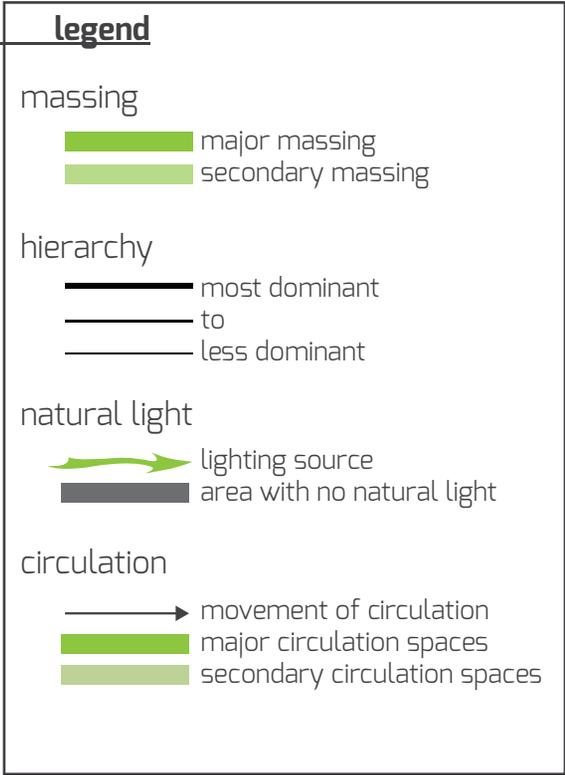


Table 3.11

typological research

Miura Hotel

by Labor 13

Celadna, Czech Republic

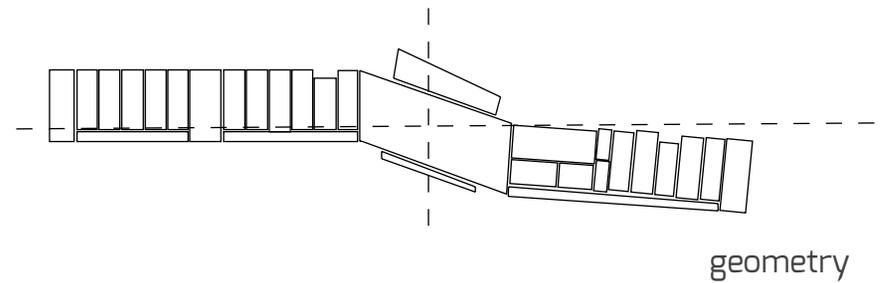
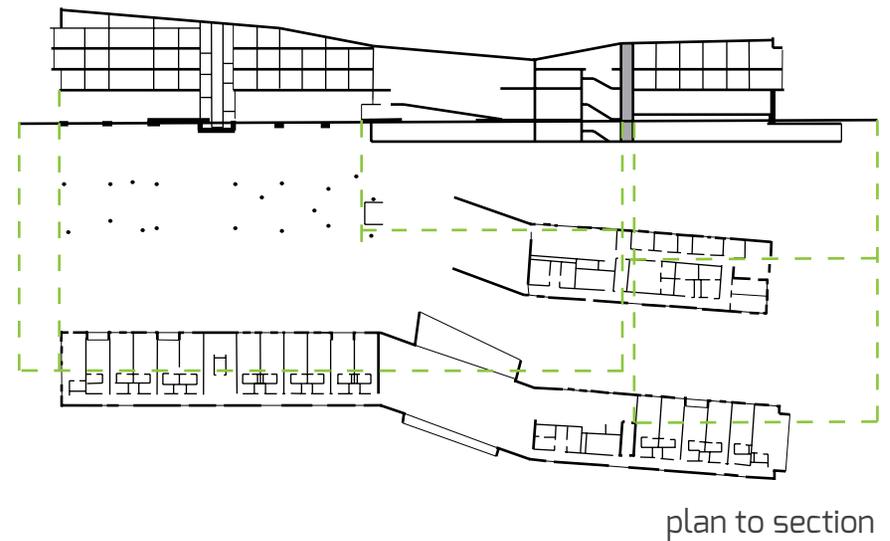
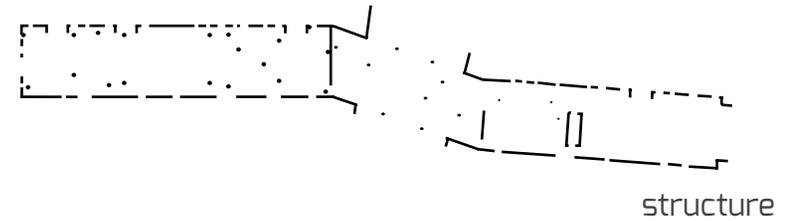


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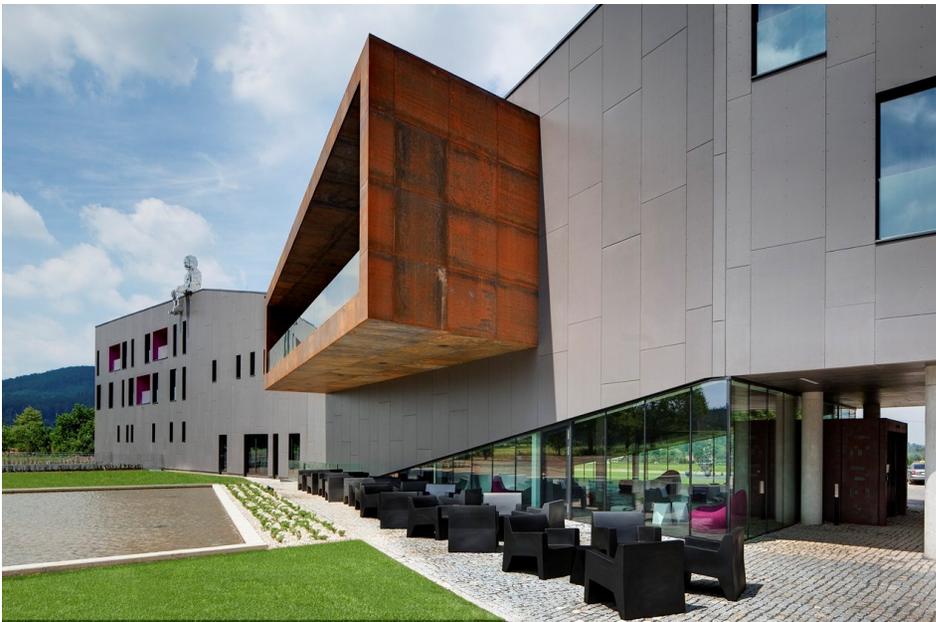
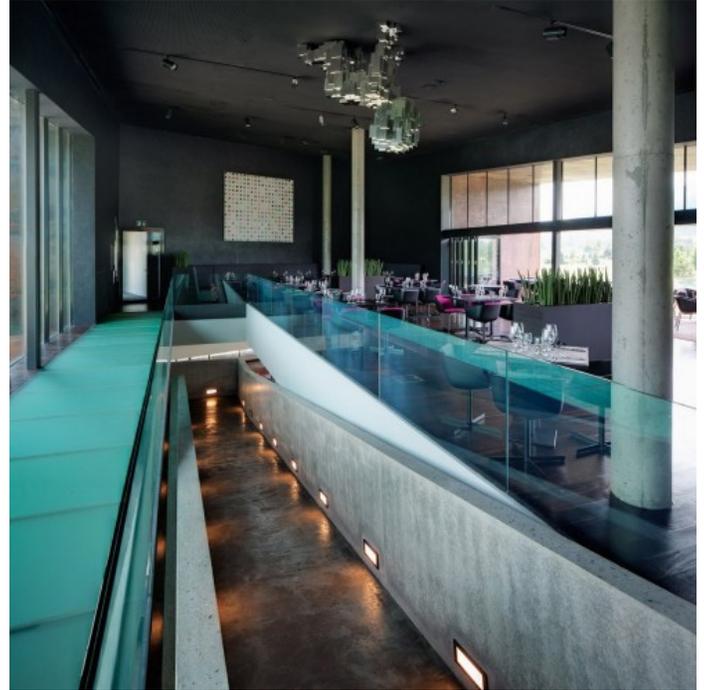


Figure 3.12

All photos provided by Archdaily

typological research summary

The three case studies represent a wide range of different hotels – from small boutique hotel to an Eco Resort to a futuristic hotel – but they all have two things in common:

1. Through innovative design techniques and a theoretical idea they create a different experience to the visitors than a traditional hotel. The Muira Hotel achieves structural and interior design innovation, the Bama Eco Resort is a creation of a new standard in tourism, and the Endemico Hotel achieves innovation through their single room buildings that scarcely fill the landscape.

2. They paid close attention to the surrounding environment, taking advantage of views, and being sustainable to the land they sit on. The Muira Hotel provides visitors with views of the mountains from every room; the Bama Eco Resorts immerses itself into the land, almost becoming one. And the Endemico Hotel imprints nearly a zero footprint on the land it sits on.

The case studies have affected my theoretical idea. I would like to examine the environment more than originally planned and look into how architecture can shape the ways you see landscape. I want to extend my explorations of innovative pedagogical design to the site, and look at how architecture and landscape architecture can influence each other.

The graphical analysis provided me with important information in the natural light, circulation, and plan-to-section aspects of the case studies. All circulation began at a central core, leading

visitors to choose which direction to take. I found that the Muira Hotel and Bama Eco Resort had an element of surprise in the way visitors moved through the space. Each case study demonstrated a design that took advantage of natural light. They all had over 75% of the building receive natural light, with the Endemico Hotel having 100% natural light. The plan-to-section is an educational exercise to look at the relationship of indoor spaces.

The site, cultural, and social contexts have major effects on the three case studies. The Endemico is placed in the beautiful wine region of Mexico, making it secluded, and aimed at an older age of tourists. The Bama Eco Resort is in the farming country of Bama, Guangxi. The site would make it a mecca for shopping and would have a social and cultural impact on the surrounding region. The region of Guangxi is primarily farming and having a resort of the scale of the Bama Eco Resort would change the socio-economics of the native people.

Each project has a strength that I will carry-on theoretically into the design of my thesis project. The Endemico Hotel creates a romantic experience, like poetry, for visitors and has a very little footprint on the land. I want to create the same secluded experience as the Endemico, but also provide adventurous opportunities for guests to immerse themselves into nature. The Bama Eco Resort is experimental architecture that examines a new way of thinking about hospitality. Although the scale of the resort is much larger than my thesis project, the innovative design and underlying idea is intriguing. The Muira Hotel could be considered built experimental architecture. The design of the interior pays lots of attention to detail, materials, and gives guest a special experience. I will take into consideration the detail of the interior spaces and how they play with light, color, and people to create a memorable space.

historical context

historical context

The Oxford dictionary defines hospitality as “the friendly and generous reception and entertainment of guests, visitors, or strangers”. This definition is different than how Oxford Dictionary defines tourism, “the commercial organization and operation of holidays and visits to places of interest.” Present day, these two words are used simultaneously in similar context. However, the historical meaning of “hospitality” and “tourism” come from different social undertakings and has transformed through the evolution of the industry. In aiming to understand the aspects of the industry, one must look into the archaeology and sociology that occurred during the Ancient Greece, Roman Empire, and currently, the Green Movement.

The beginning of hospitality was when man first established permanent settlements. Before then, hospitality could not exist because everyone was nomadic. The Dark Ages were known to have the first guest rights established and universally accepted amongst a wide range of cultures within the Greek world. The Dark Ages had few choices for travelers, many were expected to stay in monasteries that provided food and shelter (Squidoo, 2012). Hospitality in Ancient Greece became increasingly a guest-friend relationship, known as Xenia. This type of relationships was between two people from different regions, and without such hospitality travelers could be captured or killed by entering a foreign land. There were many reasons the Greeks should have such hospitality. The Greeks believed that the gods wanted them to provide hospitality, and if they turned someone away the gods would punish them. Another explanation is that people wanted to spread their name to bring them fame for providing a high standard of hospitality, and it could have been a way to show ones wealth.

These can be shown with this quote from *The Odyssey*:

“Come, friend, and give me something; for you seem to be no lowly man among the Greeks, but their most noble lord-indeed a chief. So you should offer more than others can – I’d make you famous then in endless lands. I, too, was once a man of means; my house was rich; I often gave to vagabonds, whoever they might be, who came in need.” (Homer, p. 351)

In the Roman Empire the hospitality industry was important to their way of life. The Roman god, Jupiter, was thought to watch over the law of hospitality. If a member of the society was in violation of hospitality it was a great crime and impiety in Rome. Private hospitality was the popular form of hospitality and was established between individuals that were acquaintances, of common religion, or through a third-party friend. The Roman life, in particular Pompeii, demonstrated evidence of commercial hospitality activities through the excavation of hotels, bars and taverns, and restaurants. Archaeologists and historians search for authentic evidence to enable the formation of an understanding of lost civilizations, the social act of hospitality provision and consumption. The discovery of historical evidence provides essential groundwork to the How and the When of the past. It has been proven that hospitality and the culinary arts were very much the center of Roman Life. Meals were centered around the gods and provided much of the cultural importance of hospitality and events to the Roman way of Life. Daily meals added leisure values owing to the social interactions and hierarchies of the time (O’Gorman, 2007). The Roman Empire was the center of consumption. It showed early forms of commercialization and the importance of the work/leisure dichotomy was part of their

historical context

approach to life, and emerged as a reward in the celebration of their success in the expansion and growth of the Empire. The act of cooking was a popular past time due to the lack of literature, however women of the Roman Empire were not expected to cook (Faas, 1993).

“Anyone who would know something worth while about the private and public lives of the ancients should be well acquainted with their table... man is what he eats” (Vehling, 1977)

History has seen a change in how people practice hospitality and tourism. During the beginning years of the industry the home was the primary location for hospitality, and was often indiscriminate and welcoming to all. Hospitality was regarded as a fundamental moral practice, sustaining a relationship on which a community depended, enriching morals and social bonds among family, friends and neighbors (O’Gorman, 2010). Present day, hospitality is experiencing the Green Movement. The interest in green, sustainable architecture and practices are at an all-time high. To consider a hotel as “green” it requires education and cooperation among management, staff, and guests. There are green programs set in place, such as LEED, that allow hotels to meet a standard of sustainability that makes them unique from older, more conventional hotels (Burger, 2008). Businesses are taking measures as environmental rules and regulations take hold to ensure that their carbon footprint is as small as possible. A Carbon footprint is referred to as the total amount of greenhouse gas emissions caused by a particular activity, person, product, or organization. A major change from previous movements and the green movement is the amount of resources available to the industry. Several educational and accreditation programs

encourage environmental awareness in the travel communities. For example, American Express and the U.S. Travel Association launched Travelgreen.org. The website is a resource for the industry to link to national and international organizations and associations. Another example would be the ASTA's Green Program and Green Guide, which educates travel agents and suppliers about the overview of green travel, terminology, marketing sustainable travel and green resources (Fox, 2009). Sustainability will become one of the most important trends driving hospitality in years to come.

The five dimensions of hospitality have evolved since the beginning of human history. They are as followed: (O'Gorman, 2010)

1. Honorable Tradition – the concept that guest, hosts, and strangers are closely related. Hospitality is about cultural values and beliefs of the society. Hosts providing hospitality were paying respect to the gods, and the failure to do so is condemned both spiritually and physically.
2. Fundamental to human existence – hospitality is offered based on the needs and the purpose of the guests, and usually includes food, drink, and accommodations. Alliances were developed between friends, communities, and households and were strengthened through continuing mutual hospitality.
3. Stratified – stratification of hospitality was brought on by developments in societies. The codification was based on whether the hospitality was private, civic or business. The needs and purpose of the guests and their nature were also considered. It was during stratification that reciprocity of hospitality became legally defined. Private businesses developed and hospitality management was established for the protection of the guest and guaranteeing their proper conduct.

historical context

4. Diversified – hospitality was originally for the lower classes, but during the diversification period an increasing number of higher classes traveled, creating a demand for superior levels of hospitality. Places of hospitality offered more services or were located near places of interest, and the idea of overnight accommodations for the upper class became a standard.

5. Central to human endeavor – hospitality became a vital part of society. The focus for the purpose of hospitality became the celebration of significant private, civic, and business events and achievements through life. The industry continues to be a principle driving force in society and the economy.

Block Island has not always been a tourist destination. The island was first noticed by Westerners in 1614 (History of Block Island, 2012), but it was not until 1842 that accommodations became available to visitors. Before 1842 anyone who came from the mainland stayed wherever they could find accommodations. The first hotel that was opened in 1842 was named the Harbor House, owned by Alfred Card. The first tourists to Block Island were seven men from Newport, Rhode Island. They stayed two nights and were the first on the Island to employ a boat and boatmen to take them fishing. During the following couple decades two more hotels were opened, The Spring House and The Ocean View Hotel. The Spring House was opened in 1852 and was the most prestigious hotel at the time. Of the hotels at that time, a judge and writer wrote, “The hotel accommodations at the Island consist of three small houses, lodging altogether about one hundred persons, and situated near the landing. Of these the Spring House, as it is called, is the most desirable, as it possesses much the finest situation upon the hill, over looking the other two. The view of the ocean

from it is very fine; the house being situated some sixty or seventy feet above sea level, a very little back from it, and with the land sloping down so as to give an uninterrupted view, the prospect is one upon which the visitor dwells with never-failing pleasure.” (Livermore, 2003) Present day, the Spring House is considered Block Island’s most elegant historic landmark and is one of New England’s most desirable destinations (Spring House Hotel, 2012).

It has been a relatively short period since Block Island became a summer attraction for east coast travelers. Tourist destinations, such as Newport, Stonington, New London, and Norwich, were increasingly more popular than Block Island. During the seventeenth-century, many that visited the Island greatly misjudged it and its inhabitants, calling it repulsive; its destitution of trees, plain buildings, vacant shores, little pinnacles, fishing, and no public activity during winter months repelled visitors. It wasn’t until 1875 when the steamer, *Canonicus*, brought to the Island over 10,000 passengers. These passengers came to Block Island for the pleasures of nature walks, healthy air, cool-summer days, and open fields. The character of these visitors are described as *sui generis*. The Oxford dictionary describes *sui generis* as “different from all other people or things”. They got the reputation of solid men and women, of the most moral circles of the country. A few people with plenty of money and a desire for partying vacationed at Block Island hotels during the turn of the seventeenth-century (Livermore, 2003). As the word of Block Island spread through the eighteenth-century. Fishing and summer visitors became the main economic industries. In 1959 former Commodore George P. P. Bonnell of the Cruising Club of America donated ten acres of Block Island beach property on the shore of the Great Salt Pond. This location became a rendezvous for the Cruising Club for years to come. Famous men and women have come to Block Island since to vacation,

historical context

including Franklin D. Roosevelt, John McCormack, Ulysses Grant, and Amelia Earhart (Blanchard, 1961).

The relationship between Block Island and tourism/hospitality has changed greatly over a couple centuries. The five dimension of hospitality can be traced though time. In the beginning there was no such thing as the hospitality industry. Hospitality was first evident when visitors came to Block Island for business, not vacationing. That form of hospitality was similar to the way the Ancient Greeks practiced hospitality, providing food and shelter for those in need. As Block Island became known throughout the eastern coast for its nature, boating, and beaches the definition of hospitality became more like tourism, providing leisure to visitors from afar. Today, Block Island acts as the center of human endeavor. It has become the thriving source of economic revenue for the community and the lifestyle that the locals that occupy the Island year-round provide to visitors.

goals for the thesis project

goals for thesis project

The Academic

Academically, I am completing my thesis for a master of architecture degree. Over the course of my academic years, from my Montessori education to graduate school, I have become fascinated in several aspects of architecture, arts, and culture. During my first two year of college I switched my major numerous times, never quite finding my niche. It was my third year in college that I decided to take an architecture class, and without reason, I feel in love with the design profession. My thesis allows me to study in depth the underlying interests which makes me love design, ultimately allowing me to better understand myself.

The interests that steered me to look into creating a new standard in tourism are my curiosity in culture, arts and innovation, preservation of environments, and technology. From a young age I have had the opportunity to travel the world, learning about how culture, history, and technology can influence architecture. I have been fascinated with the tourism industry, and how experiences can change the way travelers view a location, group of people, and the status quo.

I am interested in designing the site and building to be integrated on every level. I believe that a building cannot be great unless the site is taken into consideration, and vise-verse. I want to design a building that is net-zero. The academic setting provides the ideal opportunity to explore design innovation through active and passive techniques. I am also interested in how technology can influence design to support sustainability. Learning IES Energy Analysis Software will allow me to justify passive and active design decisions to support designing a net-zero hotel and restaurant.

Lastly, I am interested in how architecture can teach people about how design can influence society and the environment. People have the power to demand for better, smarter buildings. I want to design a building that will be a pedagogical design to society, potentially creating a standard in the hospitality industry.

The Professional

Professionally, I want to become an expert in sustainable design. I will strive to make a cleaner, healthier, more beautiful world through a holistic design approach. A lifelong interest in how architecture and the natural environment can play into each other has directed me to my professional passion in design. I feel that net-zero buildings are the future of architecture. Over the course of history architecture has changed to meet the demands of society. This time architecture is going to change to meet the demands of the natural environment.

The Personal

Design is in everything. From the pen that I hold to the scarf I wear, there was someone considering the economic, environmental and social aspects of the design. With that being said, there are too many resources and opportunities in design to consider anything as unimportant. I want to put my best effort in every part of thesis, my professional career, and my personal life. Although I will not be the designer of everything I use in my life, I can be the designer of my personal life. Personally, I want to do my best for the environment, society, and my personal relationships. I want to be proud of my thesis and be able to look back on it in twenty years and still feel the same sense of pride.

site analysis

site analysis

narrative

The smell of shellfish lingers in the air, an incoming boat blows its horn, families scuffle up the ramp onto the large ferry: the activity at Judith Point, Rhode Island is just another normal summer day. The Block Island ferry leaves every hour from sunrise to sundown, with tourists wanting a peaceful Island vacation in the sun. When the weather is at its finest the top deck is packed and sounds with the awes of passengers enjoying the scenic one hour ferry to their destination. From a distance, the Island appears mystical, as if it was appearing out of mid-air. New Shoreham is filled with families wanting to buy the latest beach-wear fashion, renting mopeds, riding bike, and having ice cream. The town is filled with simplistic, historical character and the car become secondary to the pedestrian. The character of the architectural style is like time travel to the 19th century New England. The old farmhouses, wraparound porches, green fields separated by stone walls make the Island a cozy retreat. The under a mile walk to the site is occupied by fresh seafood restaurants, bars, hotels, recreational activity rentals, spas, and shops. The retail is all locally owned, there are no big name companies that occupy the Island. Approaching the site one can hear the ocean waves crash along the shore and the seagulls soaring above, shrieking at the children running on the beach. Outdoor enthusiasts walk the Corn Neck Road that passes the site. Not far from the site is access to thirty miles of interconnected hiking trails. The activities will occupy even the most adventurous visitors. One can bicycle around the island, paddleboard, bodysurf, sail, parasail, horseback ride, kayak, or fish on the natural splendor of the Island's 7,000 acres. During the evening the activities do not stop. Live entertainment can be found in Island nightclubs. The site sits still with little activity, but adjacent to the site is the Beachhead

Restaurant and Bar that provides live music and entertainment for tourist and locals. The site is on the outer edge of town and where night entertainment and quite residential neighborhood meet.

The first visit I made to Block Island was in May and the weather was chilled and the Island was calm with few tourists. The second visit was in July, during the week of extreme east coast high temperatures. The Island was filled with tourists wanting to escape the heat of the mainland and enjoy time on the beach. My favorite time to visit Block Island is in the Spring when daffodils and shad blooms burst open. In the spring, the site is growing with new flowers and grasses. The air is brisk and the color is browns and greens. During the summer the site has matured and is at its full potential. The air is warm with a slight breeze, there is a comfort in the oceanic air. The color and textures are attractive, a range of colors are playing with the greens.

When I think of the site the thought of picking a beautiful flower and putting them in my hair while drinking a Narraganset beer on the beach come to mind.



Figure 6.1

site analysis

views and vistas

The transportation to Block Island is one that is unique to most tourist destinations. One must either arrive at the Island by ferry or airplane. The ferry is a hour long, passing stretches of beaches and coastal beach homes when departing Point Judith, Rhode Island. On a clear day there is a portion of the ferry ride in which a passenger can see only ocean that surrounds them. As the ferry approaches Block Island the passengers have views of the cliffs, vast open plateau, and clean beaches that make up the Block Island National Wildlife Refuge. Visitors will arrive in New Shoreman, the official city on Block Island. The site is located slightly under a mile from the New Shoreham port. As a visitor arrives on the site the views of the ocean are breathtaking and the sound of waves crashing on the shore can be heard at all hours. During the summer months the grass is a deep green and wildflower cover the site. The existing building that sits on the site is becoming over grown with weeds and vines. Standing on the highest point on the site, ten feet above sea level, a visitor can see only the roof tops of the neighboring residential homes, the ocean with ships departing the harbor, the Beachead Restaurant, large residential homes across Harbor Pond, and a fishing farm in Harbor Pond. The natural and built environment has an organic grid, forming around the ocean and ponds. Although the Island is not large, one could get lost on the windy roads and valleys. The textures and materials used around the Island are natural in appearance. Many of the buildings have wood siding and lush gardens. The site is on a portion of the Island that has little topography, although the south side of the Island has several valleys and hills. There truly are no “bad” views on the Island.

built environment

There is an abandoned building on the site which was a Solviken Restaurant in the mid-1900s. The building has been vacant for decades and has deteriorated to a point that it cannot be saved. To the northeast of the site a couple residential homes, these are 175 feet from the existing building. These homes are small in size, and most likely vacation cabins. A restaurant and bar is 200 feet to the southwest of the existing building on the site. To the west and southwest of the site are visible residential buildings, although they sit across Harbor Pond, about 725 feet away.



Figure 6.2

site analysis

water

Water is an important feature of the site and the community. The site is surrounded by water on two sides. To the southwest is Harbor Pond and to the northeast is the Atlantic Ocean. Block Island has several freshwater ponds, however there are none located on the site. Water can be seen from every point on the property. The clarity is high and the bottom on the ocean can be seen in shallow areas. There are few contaminants or litter in either body of water. There is recreational fishing and a permanent fishing farm in Harbor Pond.

light quality

The light quality is a characteristic that depends on time of day. During the day, while the sun is shining, the light quality is high. There are only a few tall trees that provide shade to the site. The site is surrounded by water on both sides, reflecting sun rays and making the sun more intense. During the evening there is no building light pollution from neighboring structures and no street lights, making it hard to see. During my first visit to Block Island in May there was a strong morning fog that made the air hazy, but during my second visit in July there was no morning haze.



Figure 6.3

site analysis

human characteristics

The site is currently vacant, but the surrounding sites are largely used for recreation. The adjacent Atlantic Ocean beach can have hundreds of tourists on a given day during the summer months. There were some tourists that walked around the site, looking at the abandoned building. Bicyclist, walkers, and runners frequently pass the site. The area around the site is a common tourist destination and humans of all ages and locations pass-by. The human characteristics change dramatically during the winter months. During the cold months there are rarely tourists that visit the Island and the human impact on the site is minimal.



Figure 6.4



distress

The most obvious evidence of distress is the deteriorated two-story building. The windows have been boarded and the wood siding is falling off or completely missing in areas. A small portion of the site that lies between the existing building and the ocean is being used for parking by beach goers. This parking area is gravel uniformly piled over the land. Cars will often park in the grass when the parking area is full. Besides the existing building and the gravel parking the site is environmentally healthy. The current distress is at a micro scale and can be easily restored.



wind

The intensity of the wind at a macro scale is affected by the Atlantic Ocean. There is a consistent breeze caused by the air being pulled with the ocean currents. The wind on the site is relatively mild, although it can get quite strong when extreme weather systems hit the Island. The wind has potential of affecting the site from sedimentation and erosion during storms and a rising tide, but has not caused major damage yet.

Figure 6.5

utilities

The electrical utility is Block Island Power. The Bloomberg Businessweek ranked Block Island Power as Rhode Island's most expensive electric utility company in 2011. In 2010 the Rhode Island Utility Commission approved a wind farm to be developed on Block Island, but this has not moved forward since the approval. The trash is transported to the mainland for disposal.

plant cover and vegetation

The site has an abundance of plants, with almost the entire site covered with vegetation. The vegetation is low-lying with only a couple mid-sized trees. The growth of vegetation is supported by the ample water supply and sunlight. The texture of the plant cover is waxy, small leaves, delicate, and colorful. White, green, brown, yellow, and pink make up the colors of the vegetation.

site character

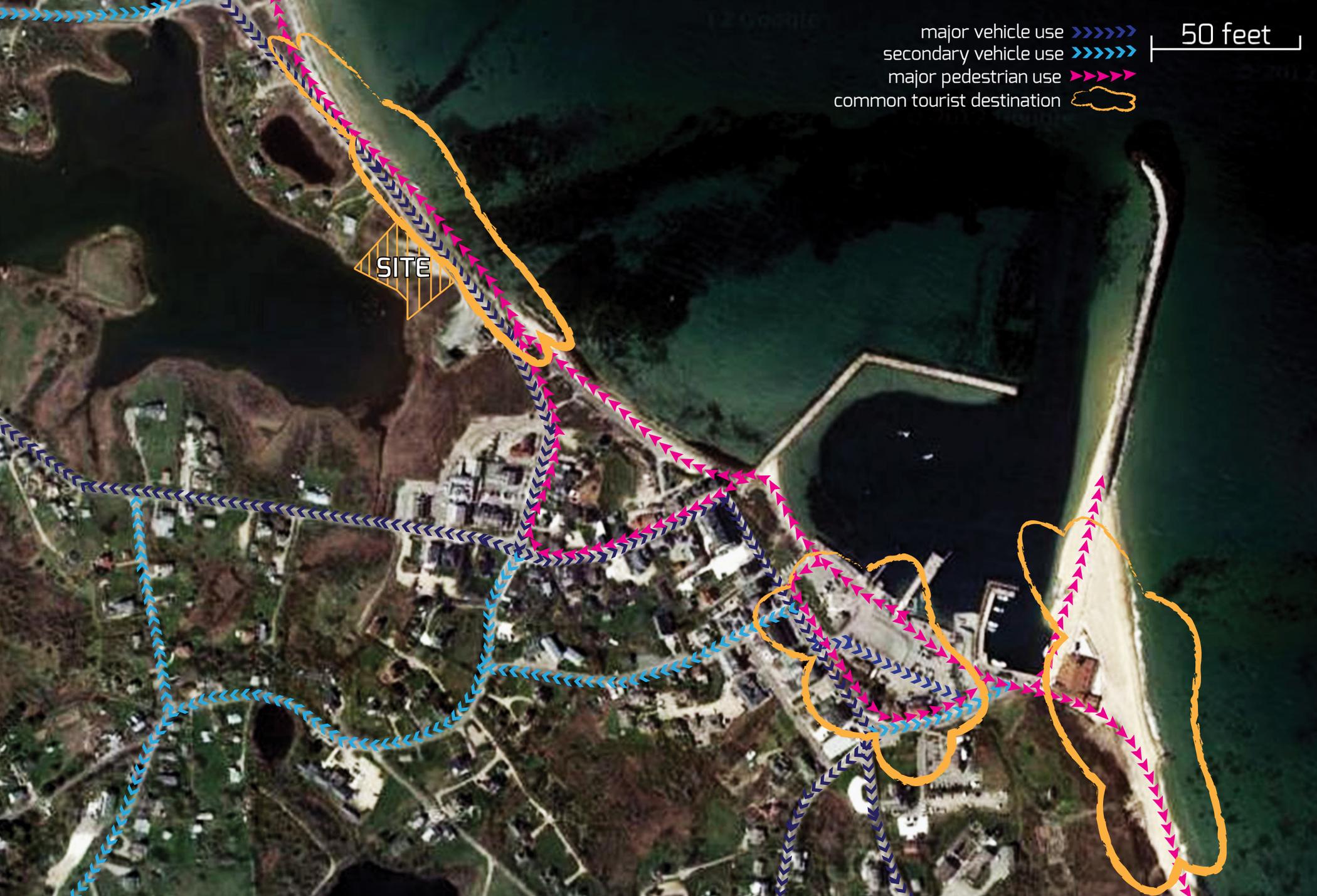
The character of the site is natural. There is an existing building that is overgrown with weeds. Although the existing building is abandoned it has a historical charm. Besides the building, the rest of the site is fresh, lively, and full of life.

vehicular traffic

The site is on Corn Neck Road, which is the only road that connects the north portion of the island to the south. This major road can hold high traffic during summer days. The ratio of human to vehicles is low because the cost to bring a car on the ferry is high. During the summer, mopeds are a preferred form of travel among tourists and residents. A portion of the site is used to park cars, moped, bicycles, and utility trucks. The pedestrian has right-of-way on all road on Block Island.

pedestrian traffic

During the summer months the pedestrian traffic around the site is heavy. There is a popular beach adjacent to the site that people of all ages attend. Tourists are able to rent bicycles at several locations on Block Island and there are a large number of tourists who use walking as their form of transportation.



- major vehicle use >>>>>>
- secondary vehicle use >>>>>>
- major pedestrian use >>>>>>
- common tourist destination

50 feet

SITE

Table 6.6



distribution of surface material:

red - sand & gravel in beaches & dunes

blue - sandy diamict sediments

green - sand and gravel

no color - sand

topography ———

water well, less than 35' deep ●

50 feet

Table 6.7

soils

The site is on Sandy Diamicton Sediments, which is mixed sand, silt, and minor clay in matrix. It contains between 3-15% gravel by volume and scattered boulders. The sediment is stratified but poorly sorted. The area surrounding the site is sand and gravel. This has fine to coarse sand, minor pebbly gravel and wind-formed dune deposits. The sand is moderately sorted and coarse gravel can be found in narrow beach deposits. There has been bedrock detected on the site that is 1,140 feet below sea level. The bedrock seismic velocity indicated that the rock is dense, non-weathered igneous or metamorphic rock (U.S. Geological Survey, 1996).

topography survey

Block Island consists of two highlands surrounded by sandy lowland, the site is on sandy lowland. The southeast side of the island has an area of about five miles that are flat to mildly rolling topography. The southwest has high-relief topography with the summit of Beacon Hill, the highest point on the Island, at an elevation of 211 feet. The site is in the sand lowland and spreads over three square miles. The maximum elevation of the sandy lowland is forty feet above sea level. The northern tip of the island is highland with the land surface reaching 100 feet above sea level. Clayhead is the highest point on the northern side of the Island and has an elevation of 141 feet.

site analysis

photo grid



BASE MAP

This base map was created to help the reader better understand the site surroundings and features. The base map helps the reader correspond photo-grid photos with a particular location on the site.

Figure 6.8

a



b



north



south



west

c



east



north



northeast



southeast



south



west

4



northwest

5



northwest

6



west

7



south

Figure 6.9

climate data

temperature

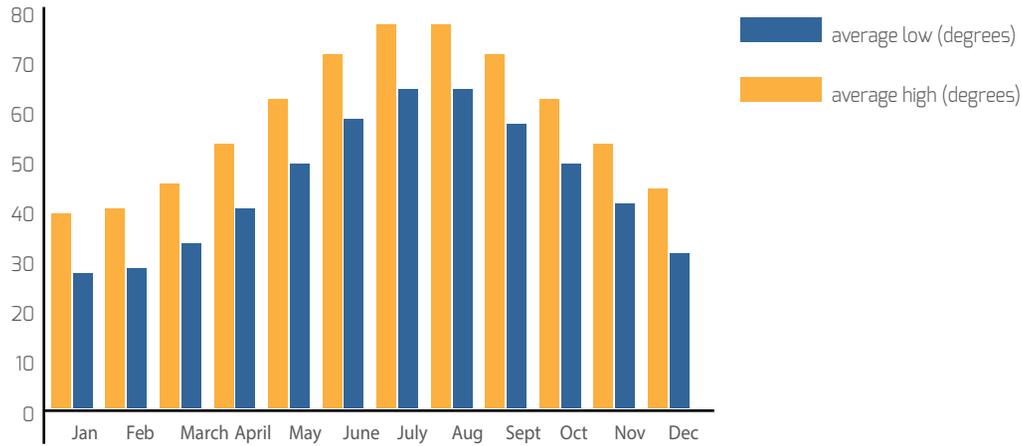


Table 7.1

precipitation

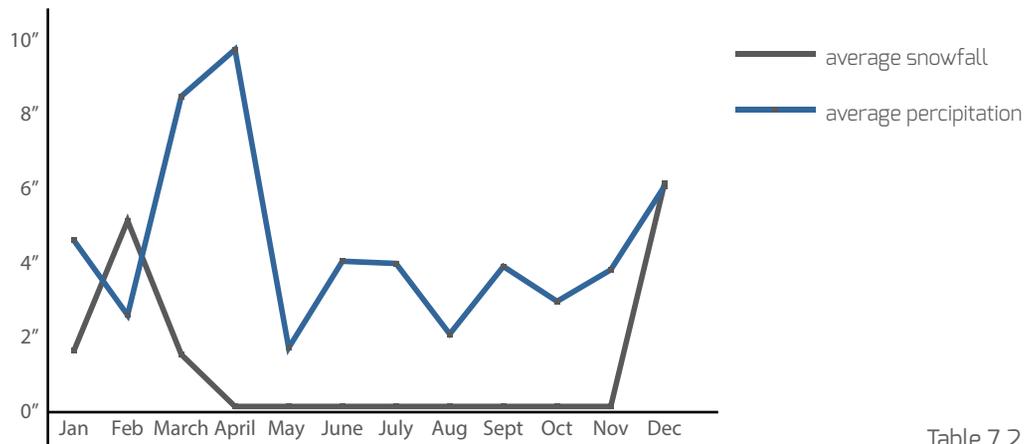


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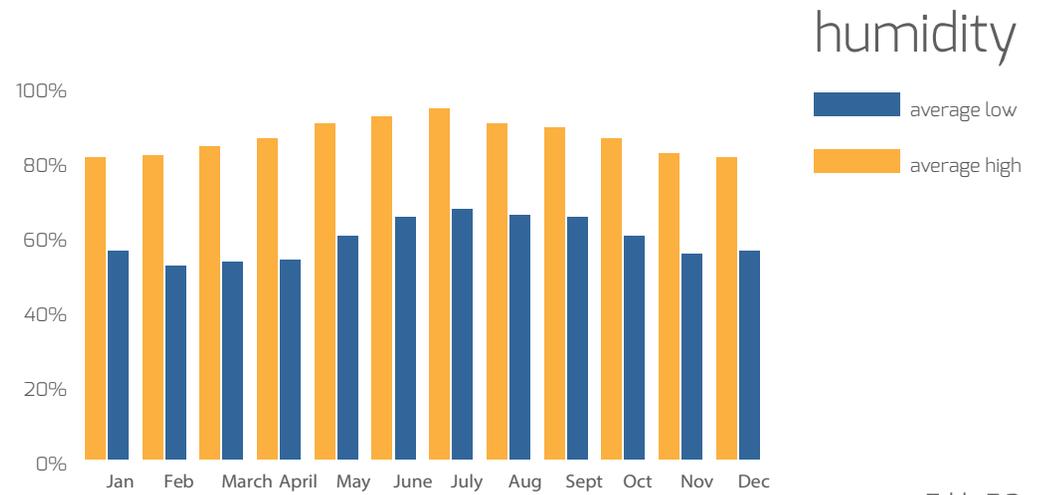


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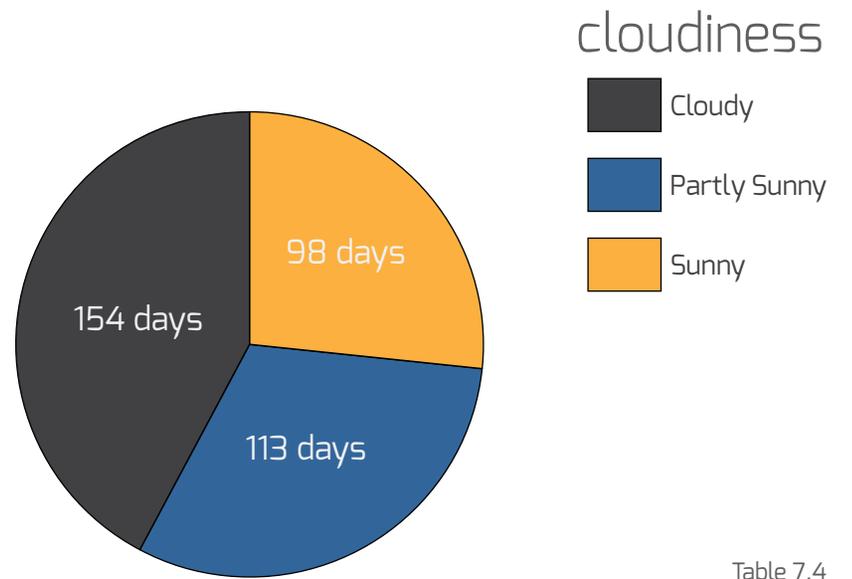


Table 7.4

climate data

wind direction

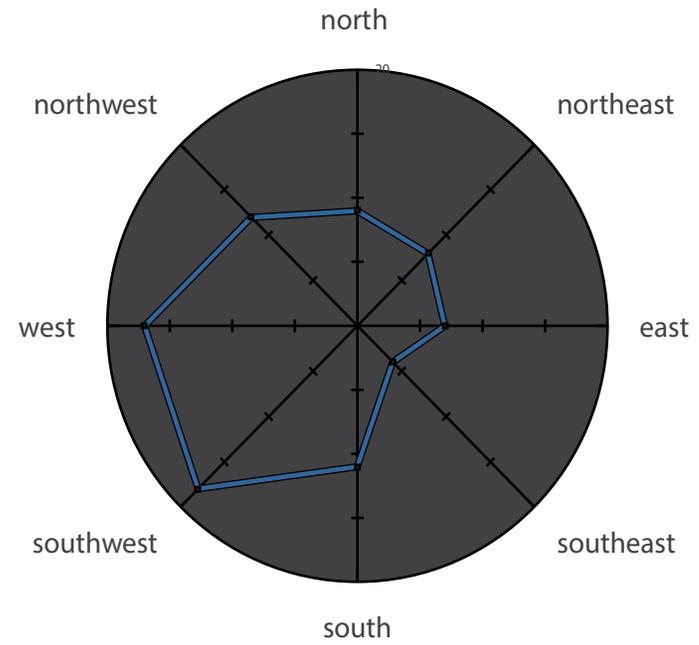
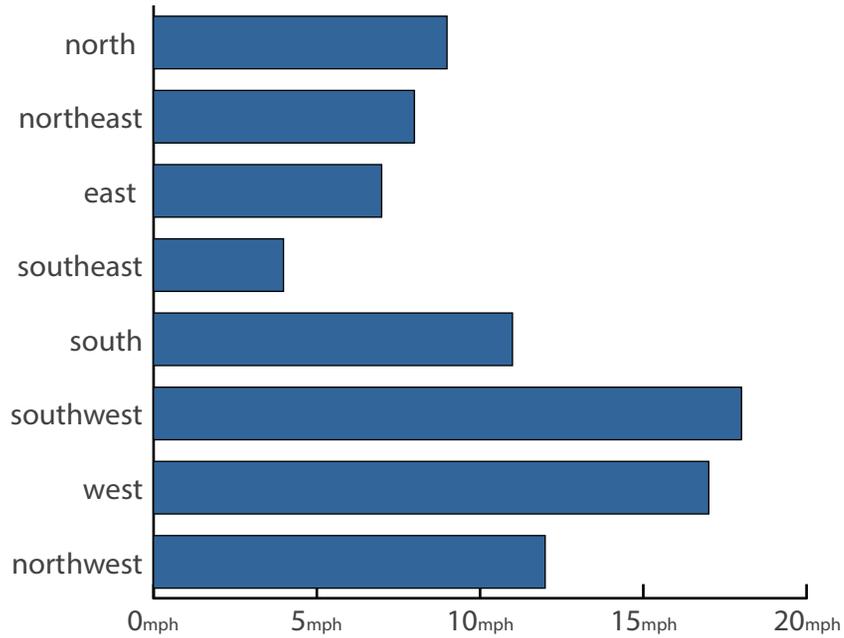


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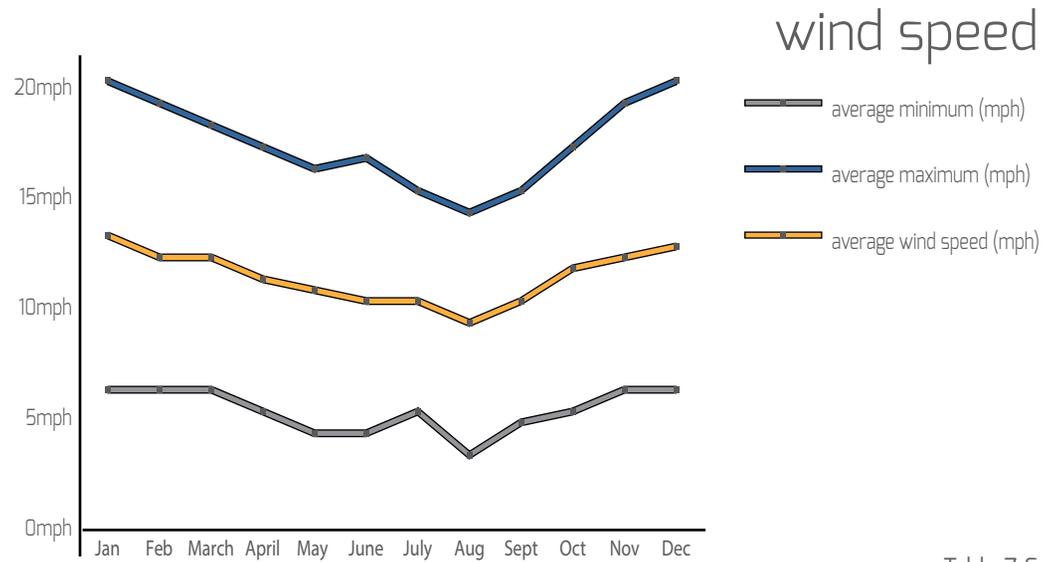


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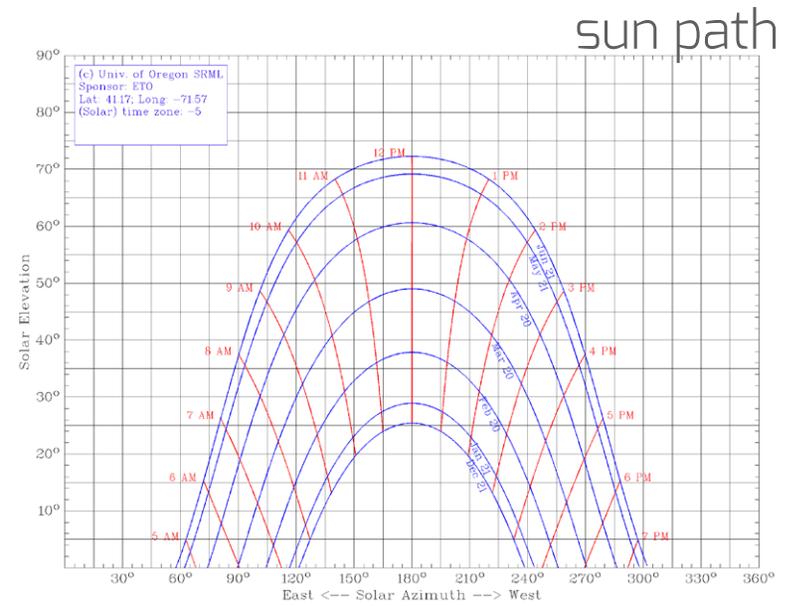


Table created by University of Oregon SRML

Table 7.7

climate data

noise and shading



Google Maps 2012
Table 7.8



March 21

June 21

September 21

December 21

6am



9am



3pm



6pm



Table 7.9

climate data

slope and climate

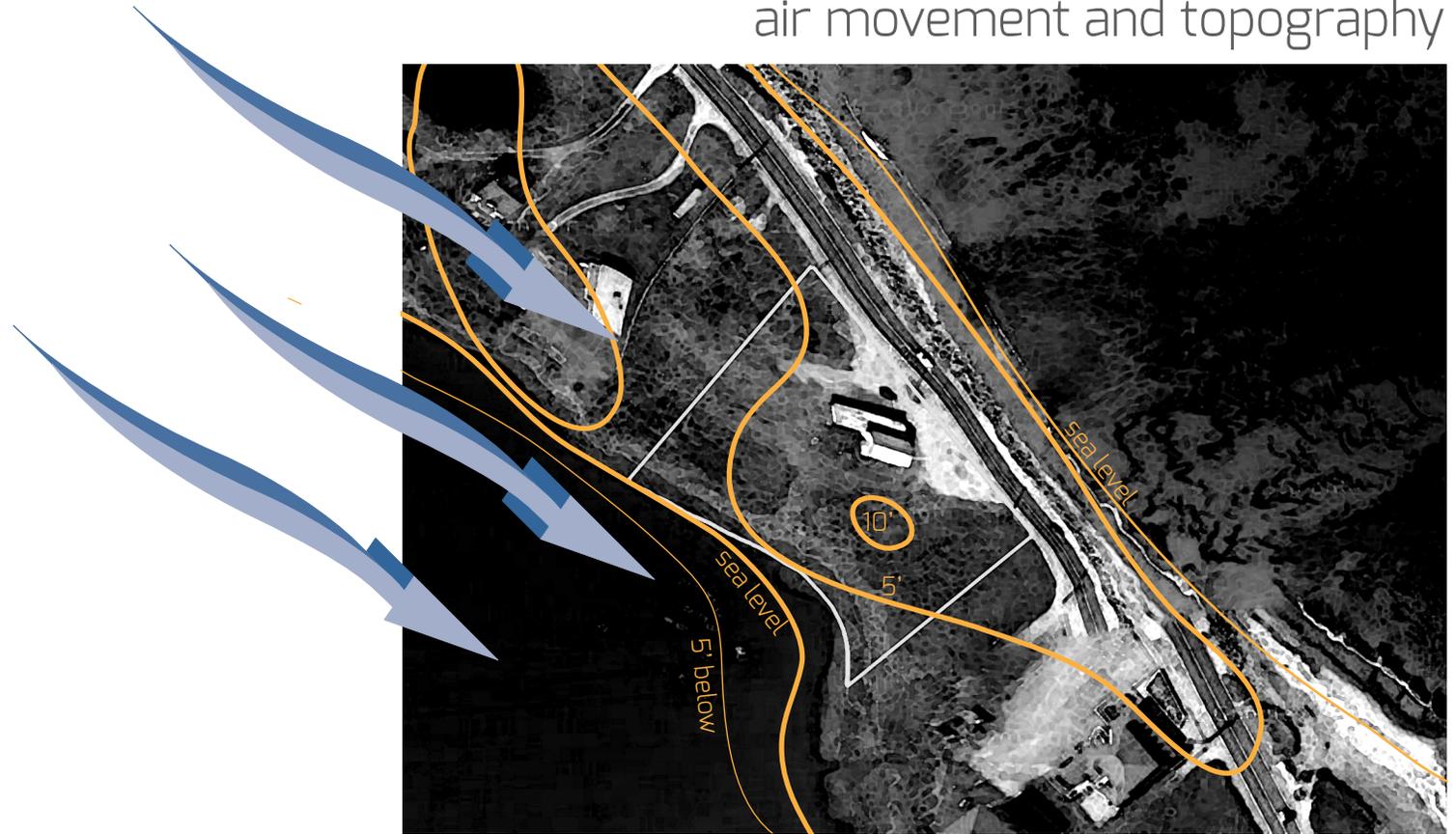


climate - oceanic

Table 7.10

10' above sea level
5' above sea level
sea level
5' below

air movement and topography



each contour line represents 10'
Table 7.11

[110]



space allocation

space allocation

interaction net

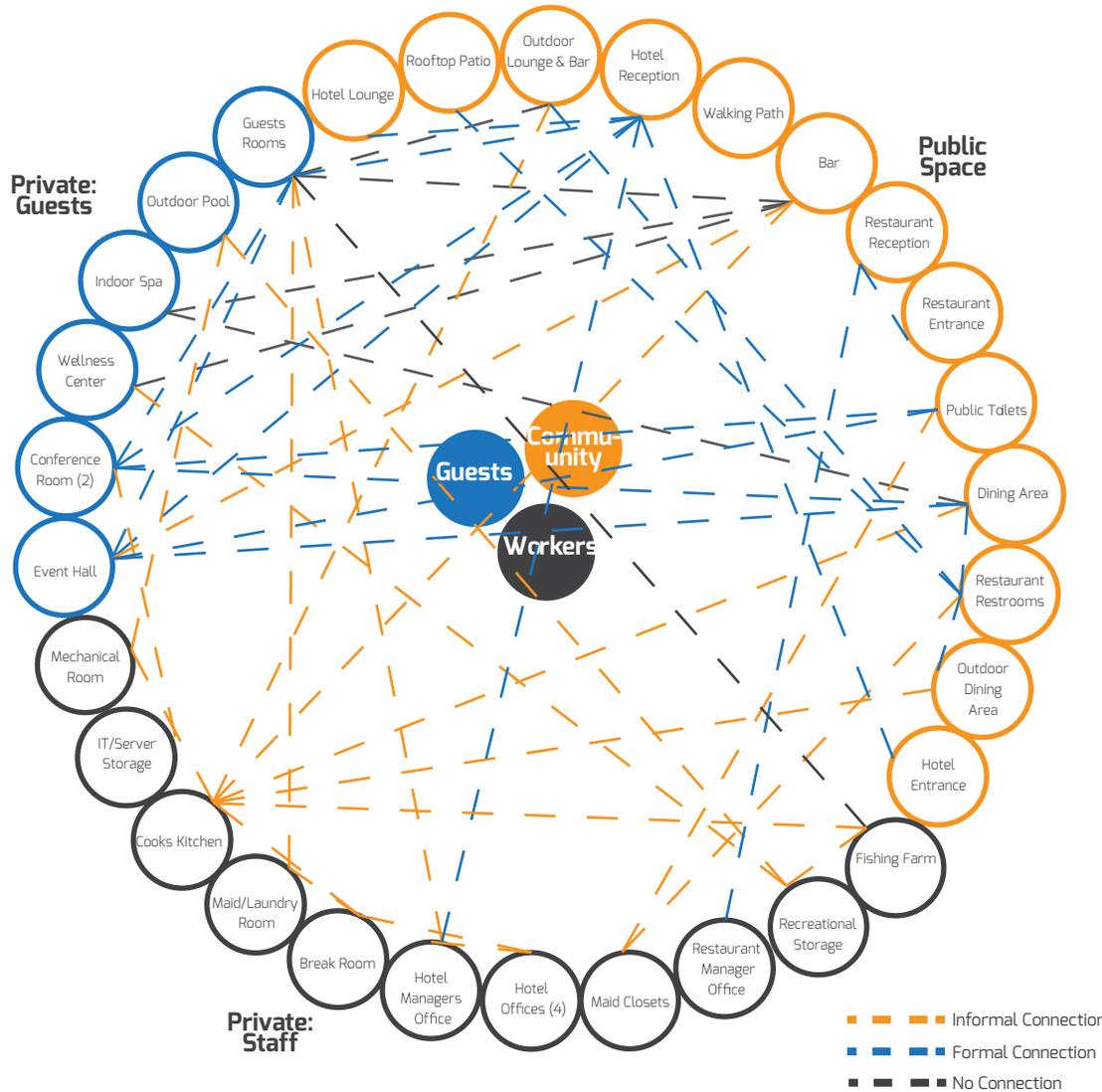


Table 8.1

space allocation matrix

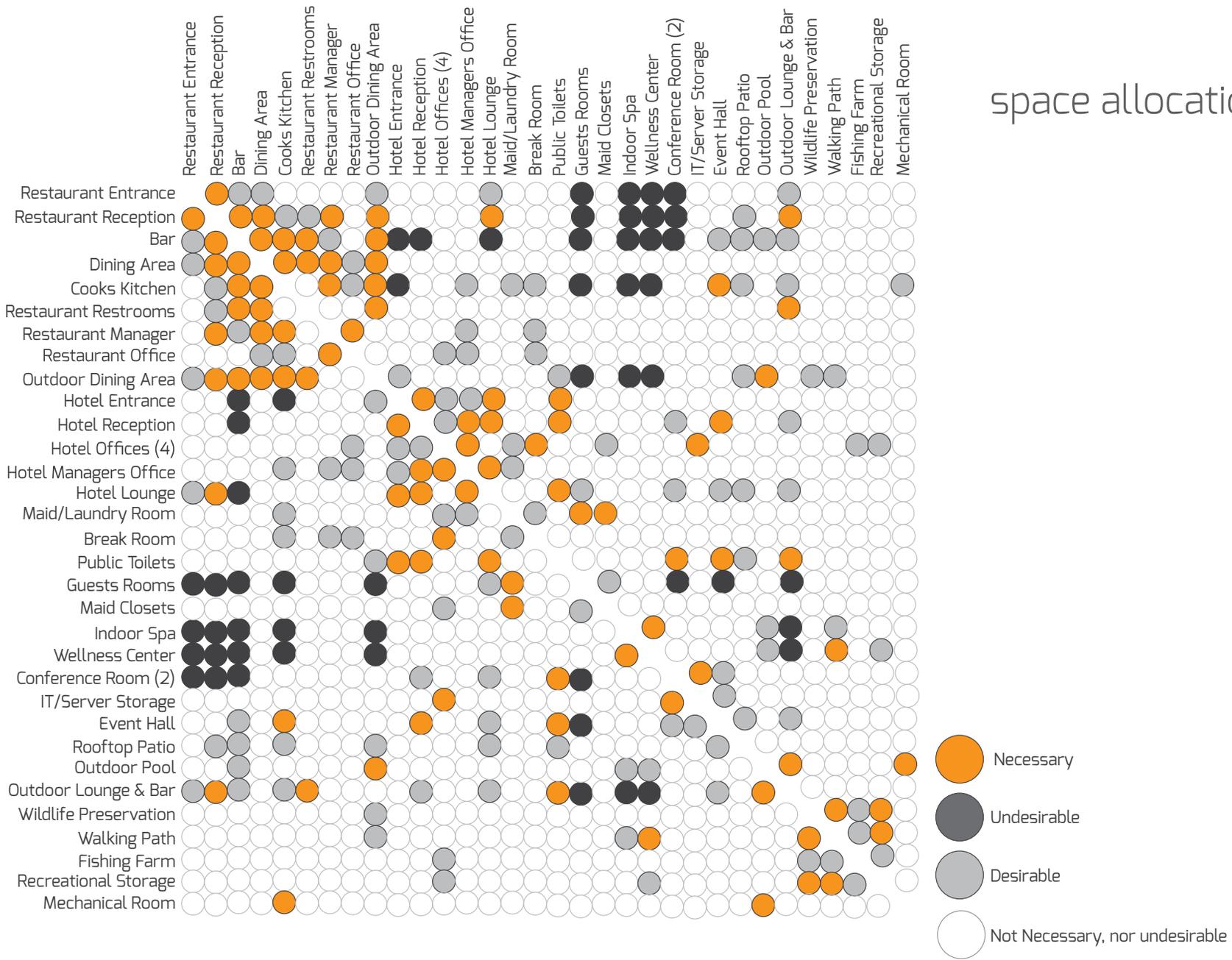
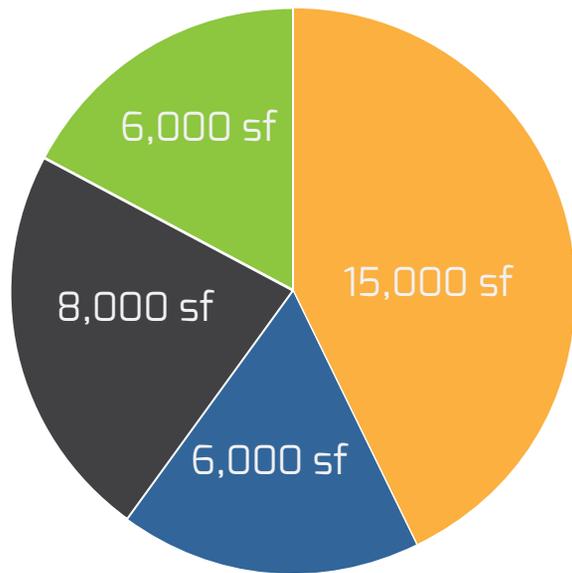


Table 8.2

space allocation

Approximately 35,000 square feet

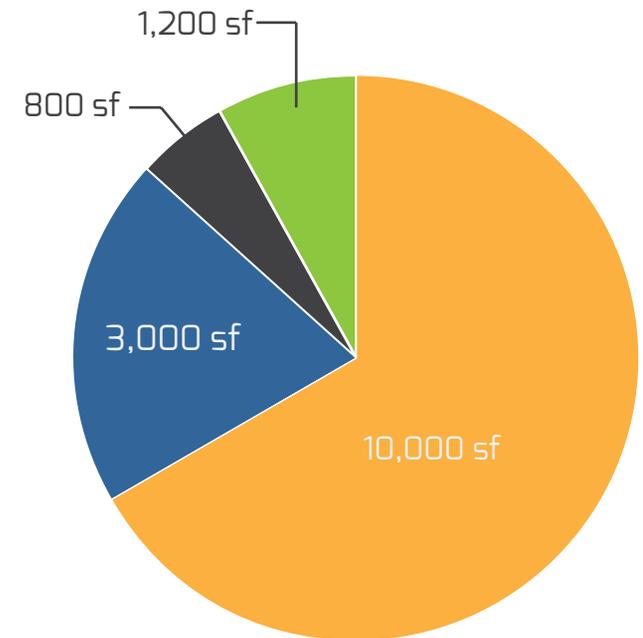
Guest Services: 15,000 sf
Staff and operations: 6,000 sf
Public: 8,000 sf
Circulation: 6,000 sf



- circulation
- public
- staff and operations
- guest services

Table 8.3

Guest Services:



- event hall
- conference rooms (400 sf each)
- indoor spa/wellness center
- guest rooms

Table 8.4

Staff and Operations:

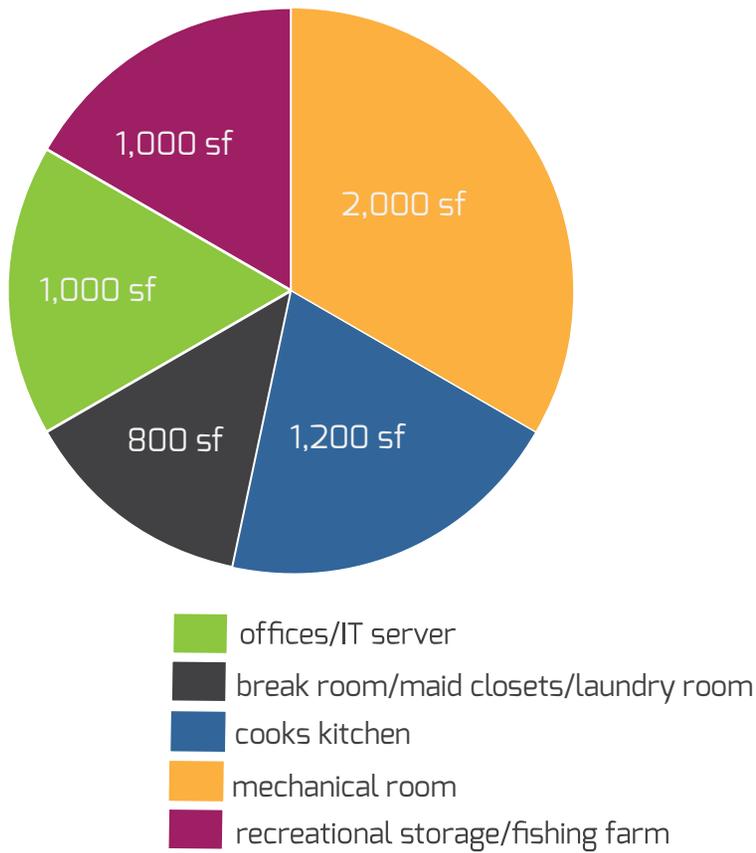


Table 8.5

Public Services:

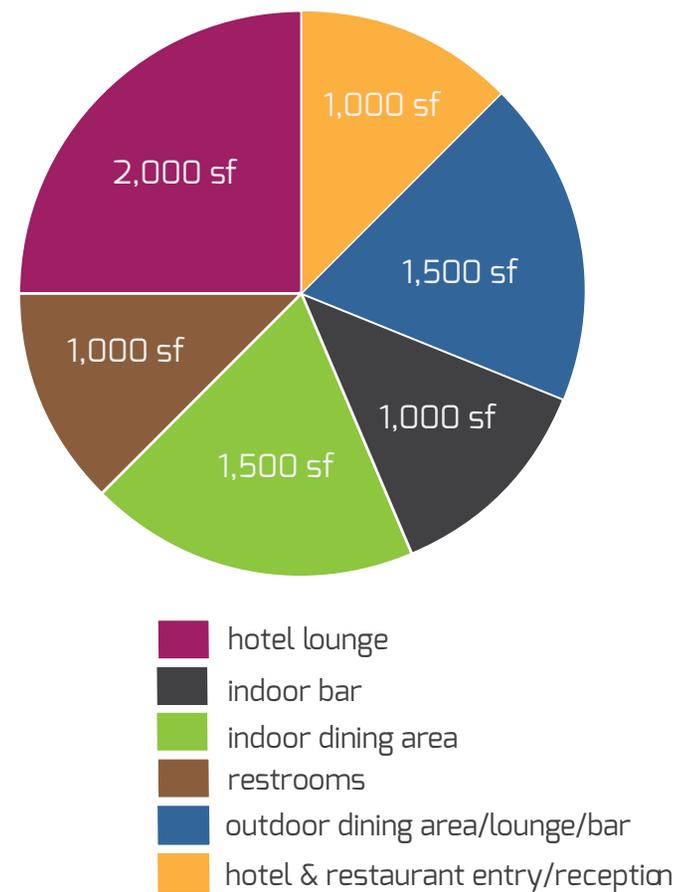


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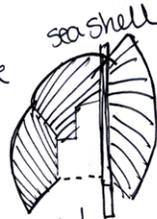
thesis design

design process

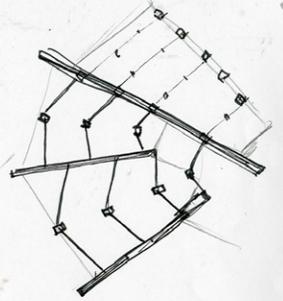
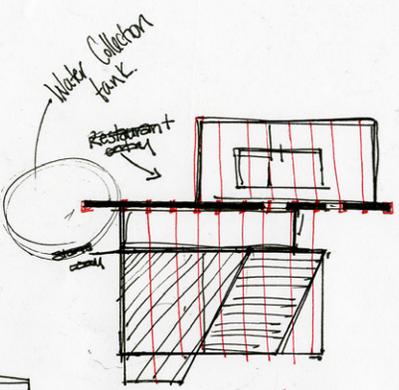
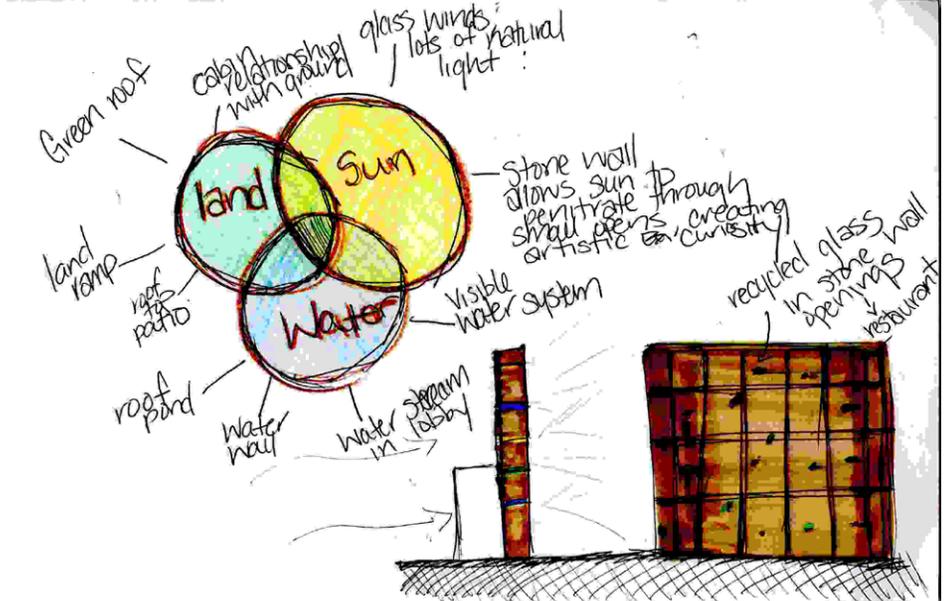
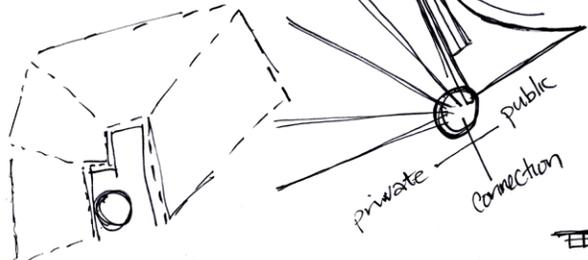
Inspiration

Reflection
Existence

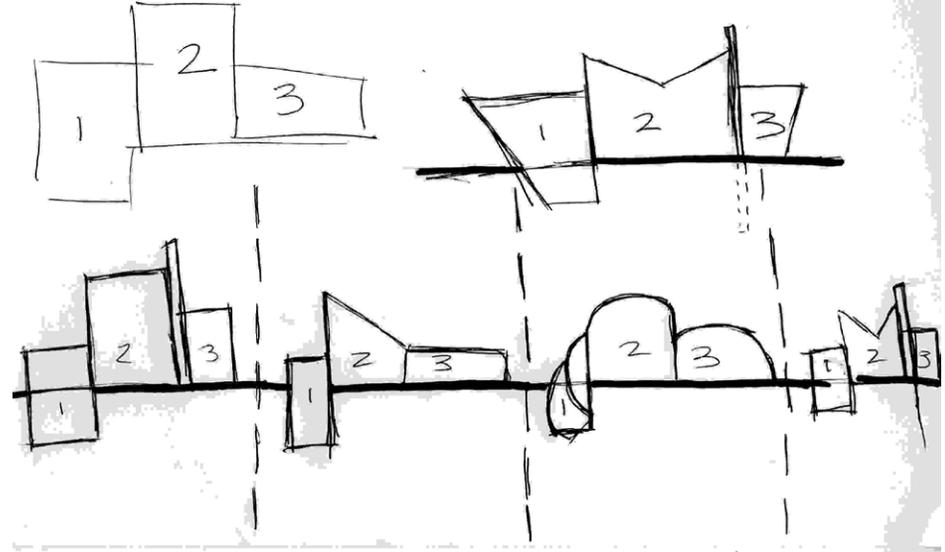
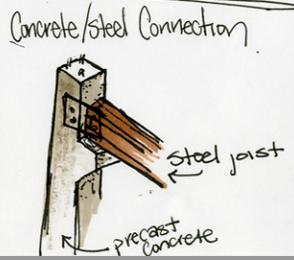
stone wall is an artifact from the past. It acts as a foundation + separation between public + private

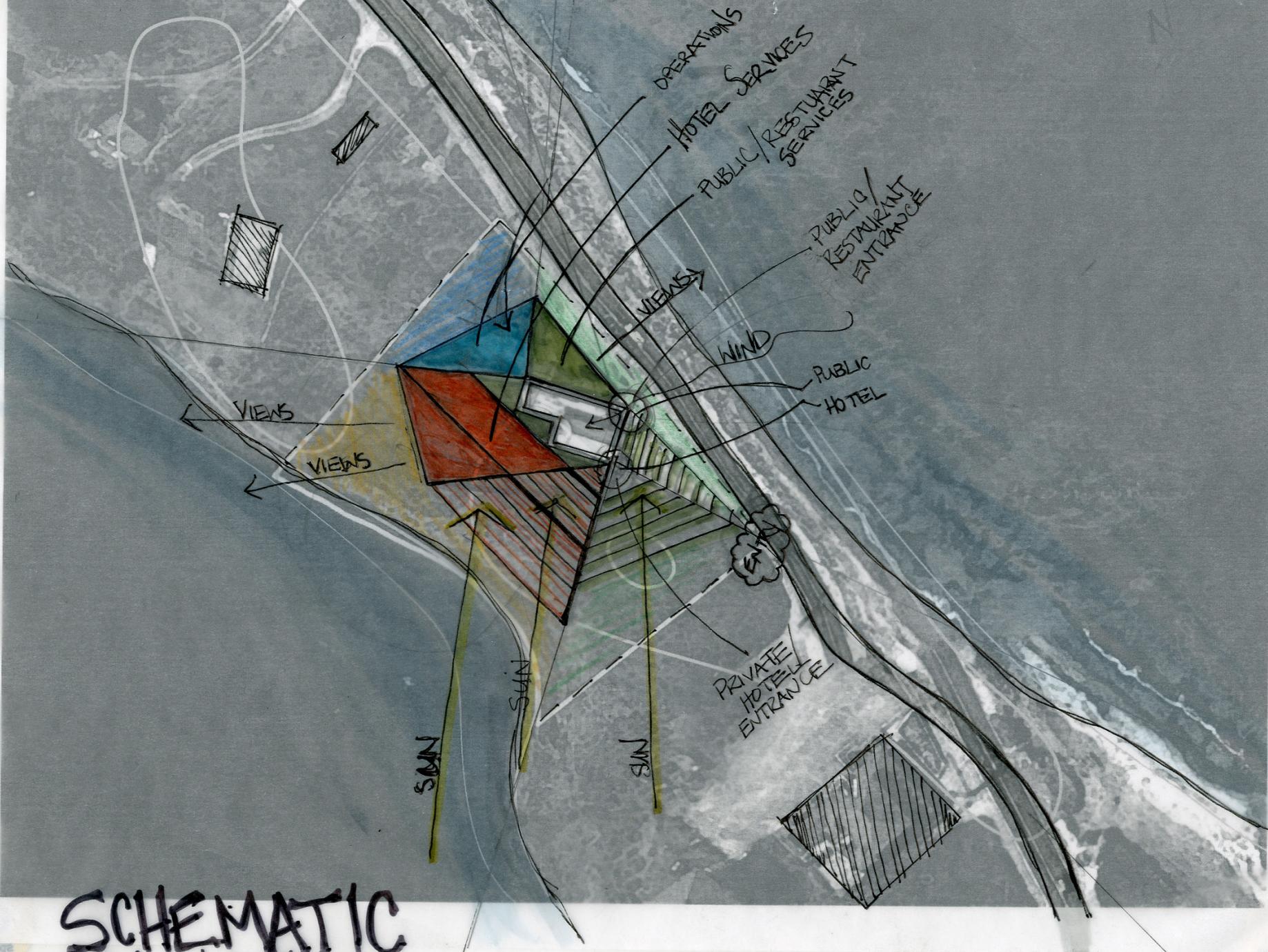


REFLECTION
building that works with water + land



Concrete/Steel Structural System
16" square Columns





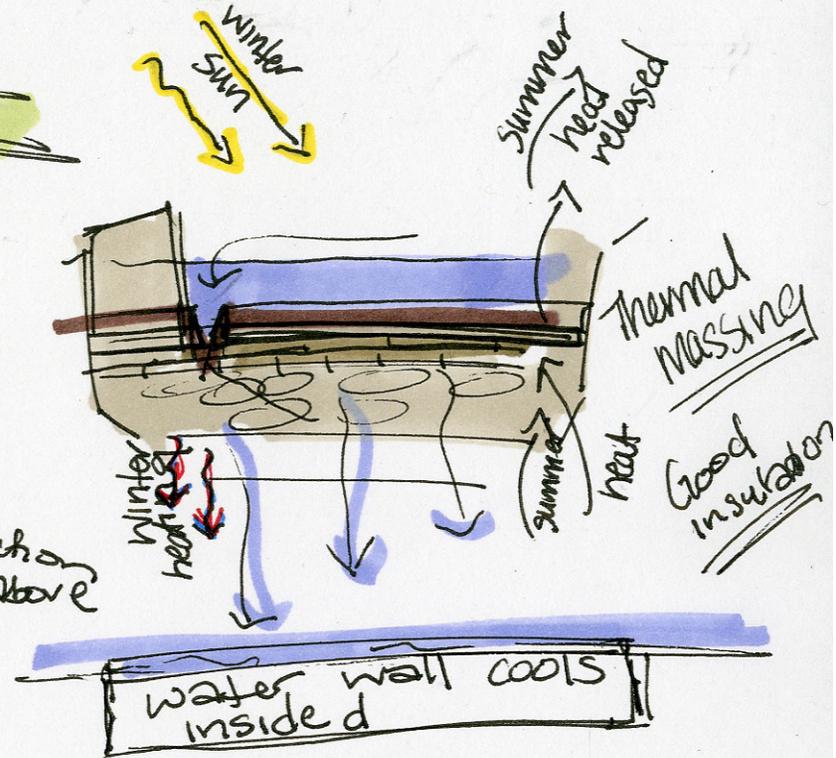
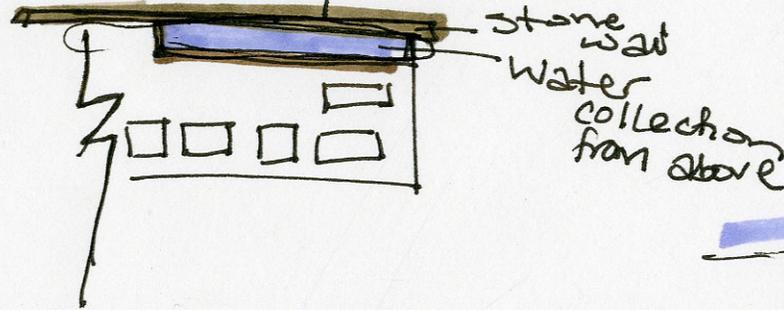
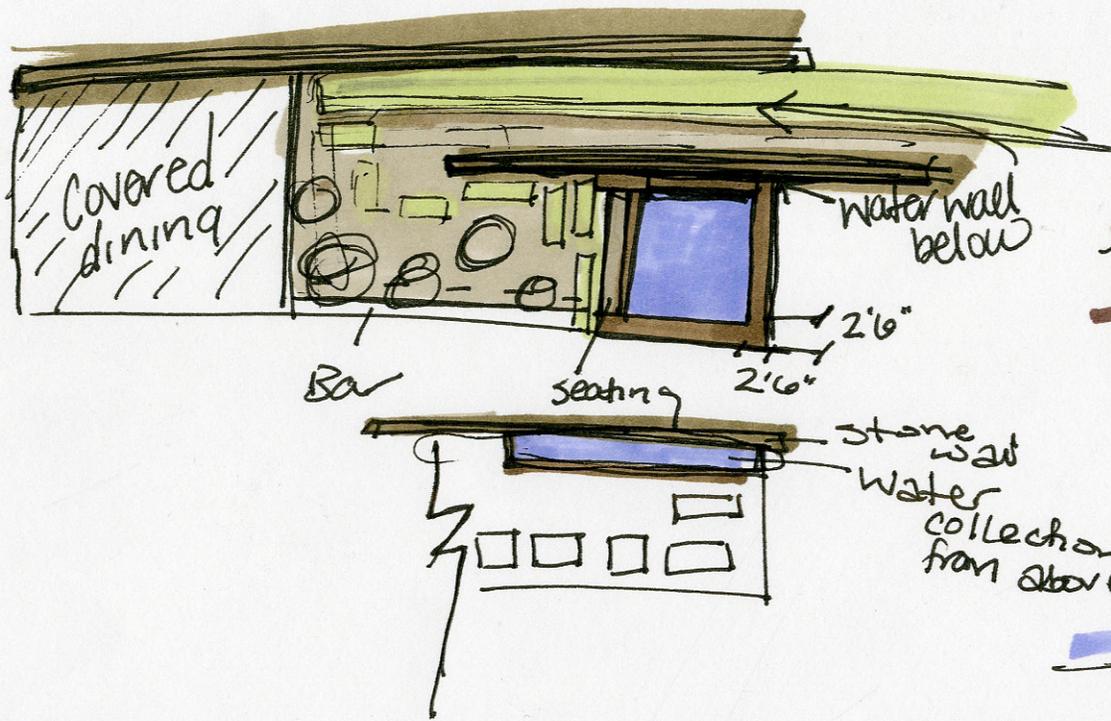
SCHEMATIC

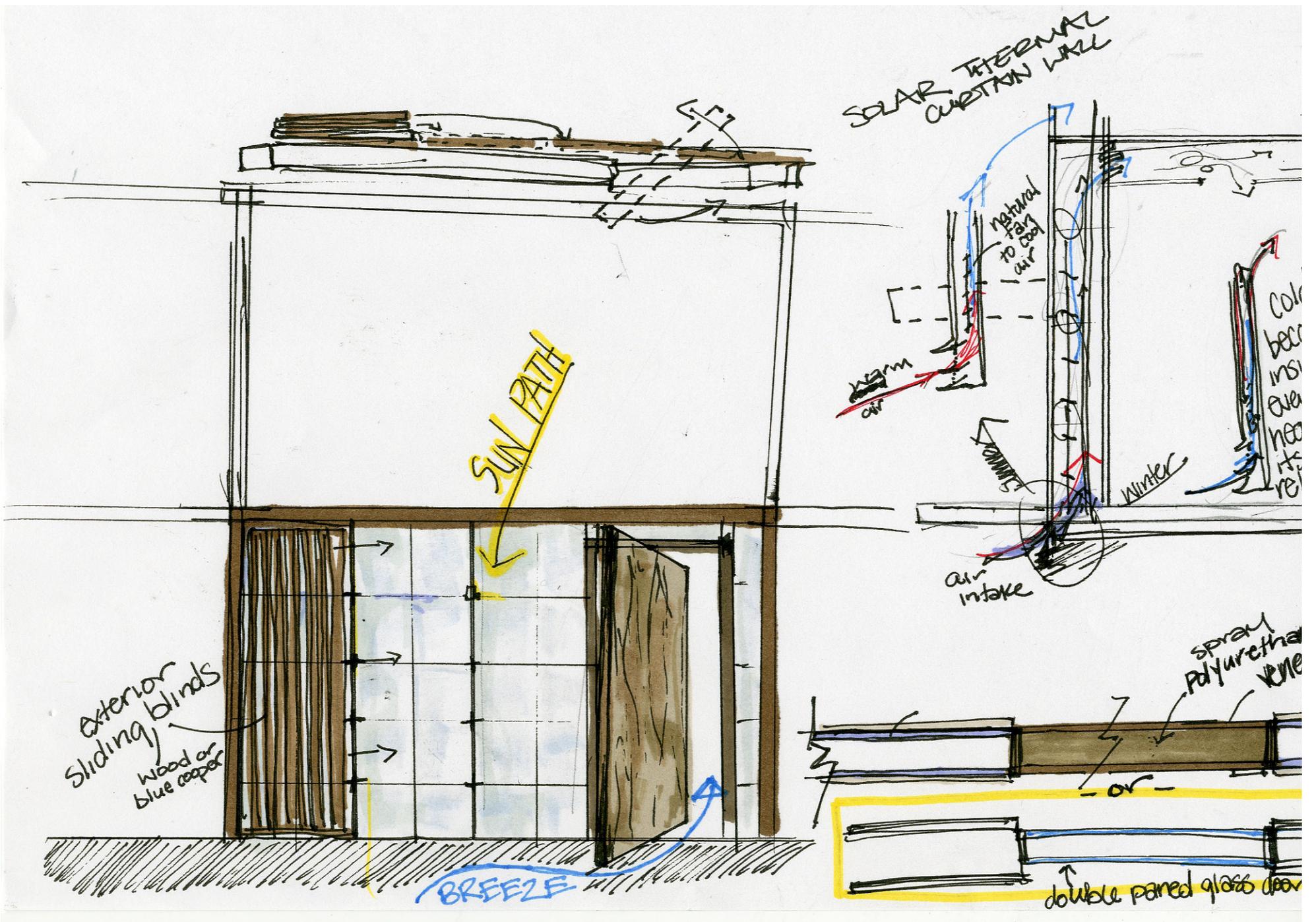
Site Context Analysis

design process

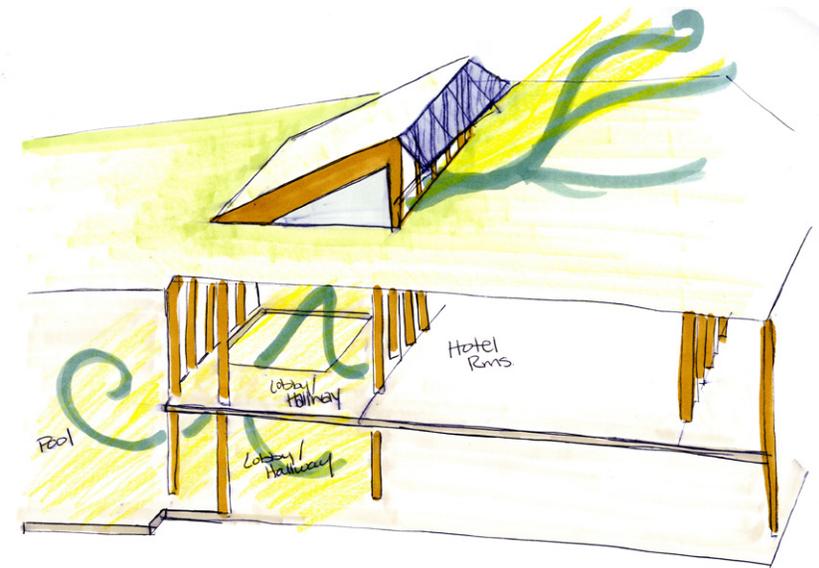
Roof Pond - Summer (thermal panels placed over roof pond in winter)

- Need to add more structural support





design process

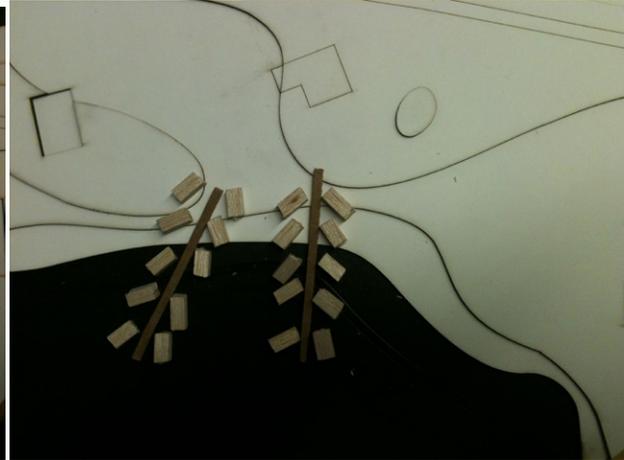
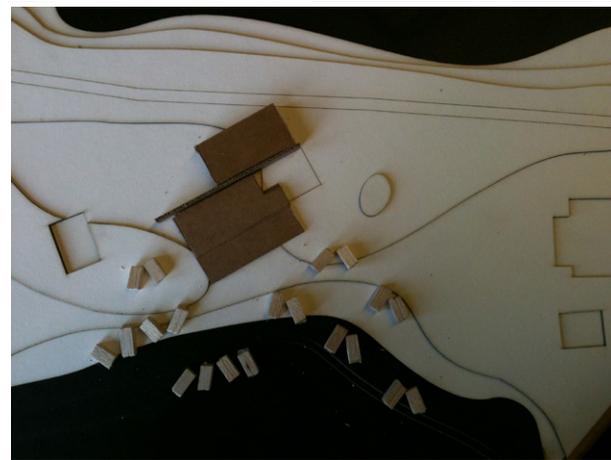
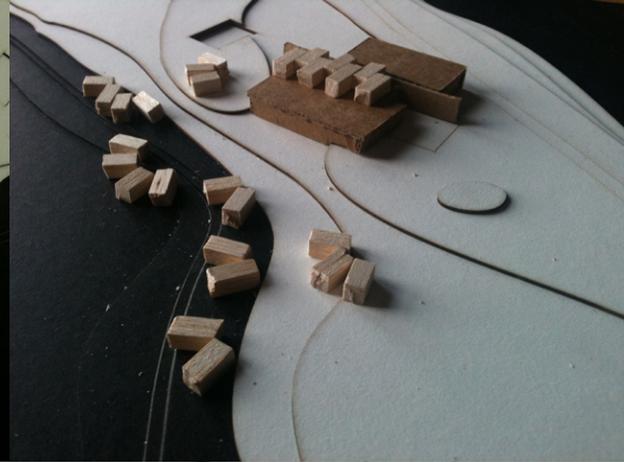
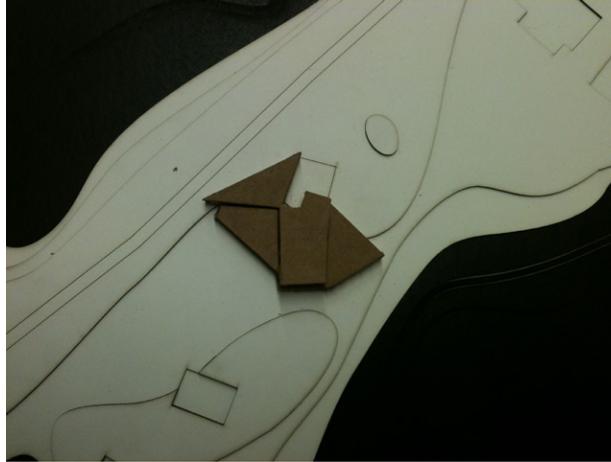
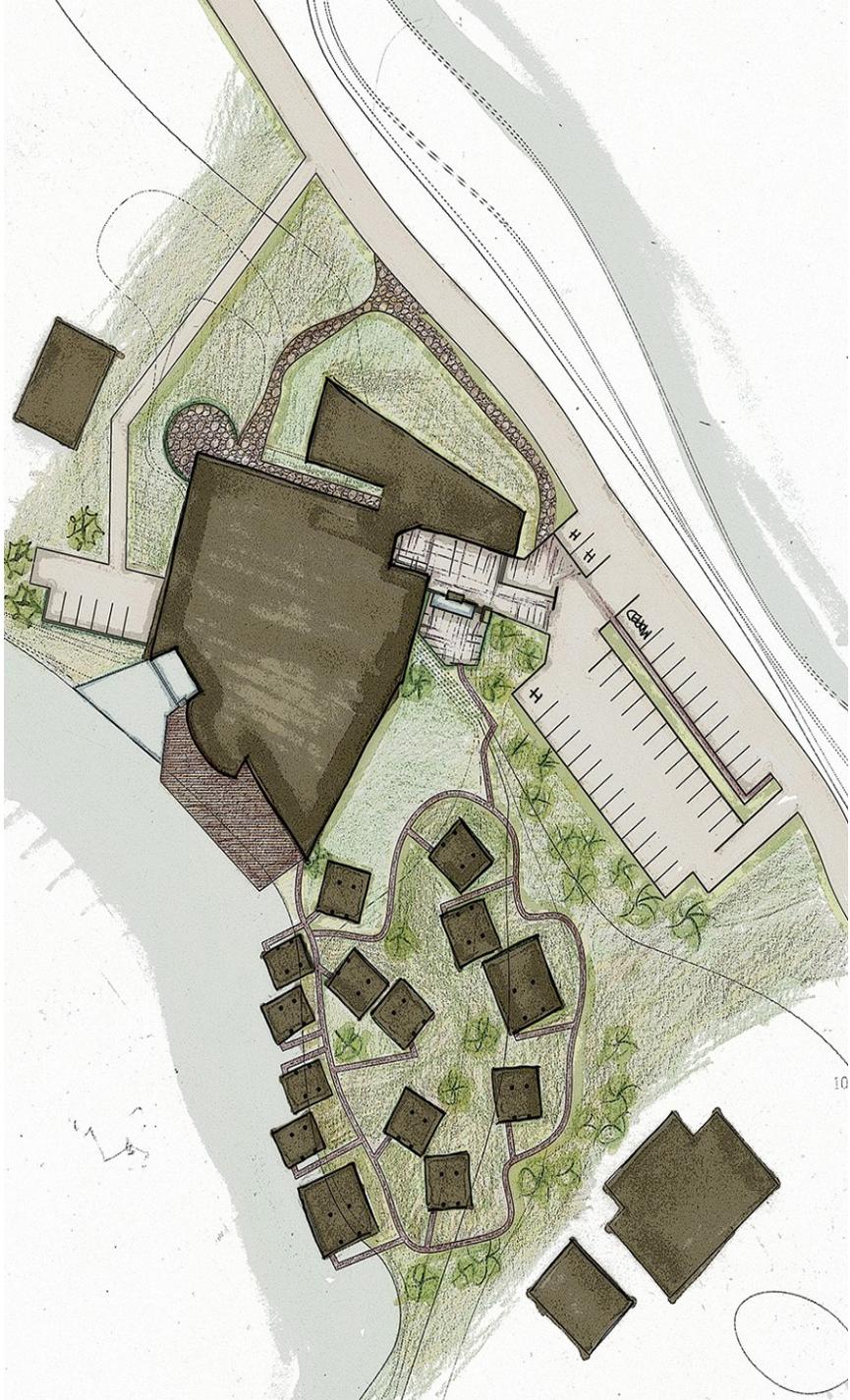


Shared cistern & Filtration system

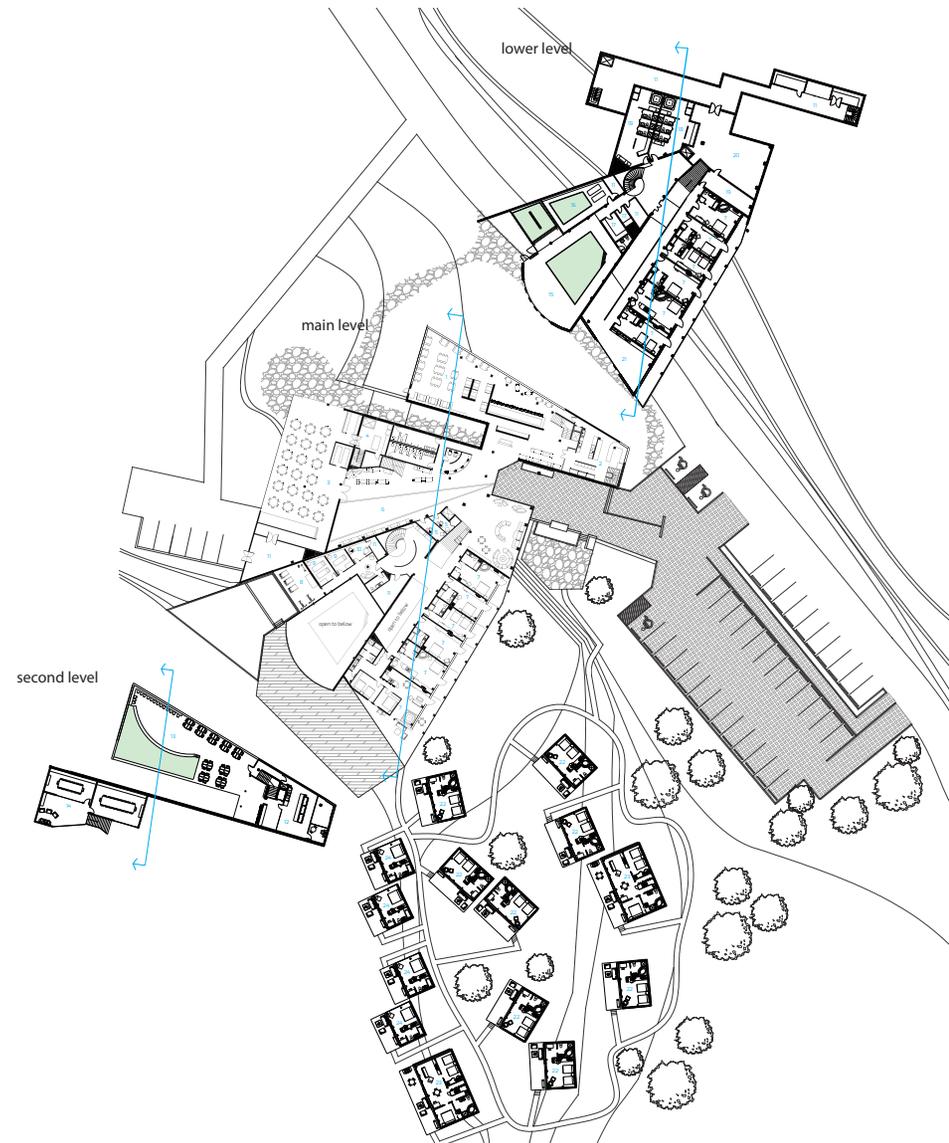
Grey Water from sink and tub are used for irrigation for surrounding landscape



Geothermal Pond Loop System (4 loops per 1,000 sq ft)



final design



PROGRAM

Level One

- 1 Restaurant and Bar
- 2 Kitchen
- 3 Event Hall
- 4 Event Hall, Kitchen
- 5 Hotel Offices
- 6 Lobby
- 7 Hotel Rooms
- 8 Wellness Room
- 9 Massage Rooms
- 10 Spa Office
- 11 Storage

Second Level

- 12 Restaurant Kitchen and Office
- 13 Roof Top Patio
- 14 Business Center

Lower Level

- 7 Hotel Rooms
- 15 Indoor Pool and Sauna
- 16 Thalassotherapy Spas
- 17 Sauna
- 18 Changing Rooms
- 19 Storage
- 19 Maids Room
- 20 Mechanical Room
- 21 Hotel Commons

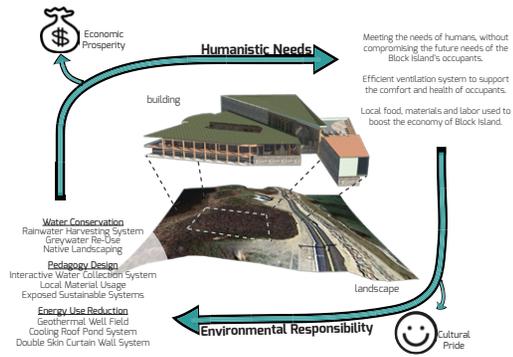
Cabins

- 22 Standard Cabin
- 23 Petite Cabin
- 24 Family Cabin

Overview

- Fourteen Cabins
- Twelve Hotel Rooms
- 2,174 sf of water features
- 3,564 sf of event space
- 8,270 sf of resaurant & bar
- 16,287 sf of hotel accommodations
- 1,413 sf of business center
- 5,302 sf of public lobby
- 4,498 sf of mechanical & storage space
- 4,200 sf of cabins
- 50,474 total sf of building complex

HOLISTIC APPROACH DIAGRAM



CURTAIN WALL SYSTEM DETAIL, GROUND VENT

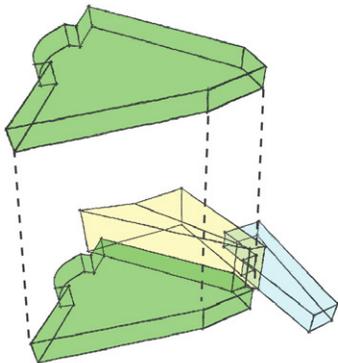


SECTION PERSPECTIVE AT HOTEL PORTION

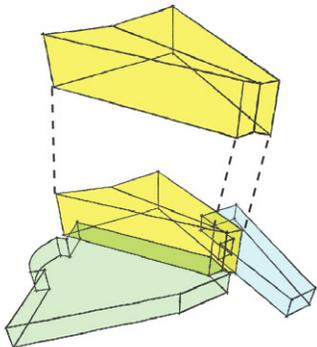


SPATIAL LAYOUT

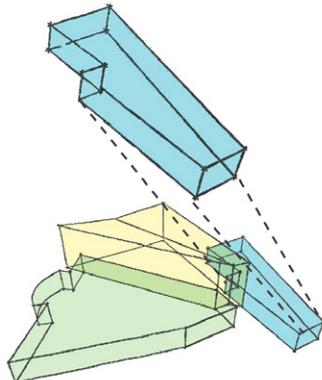
HOTEL & SPA



EVENT CENTER

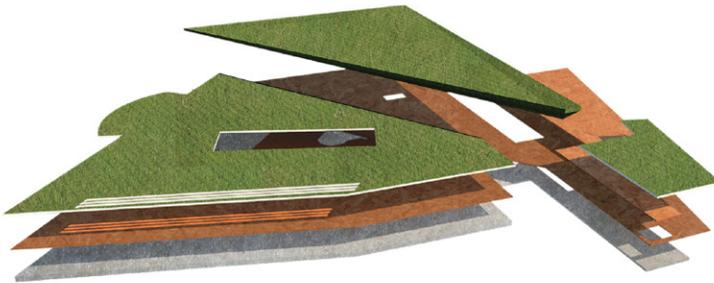


RESTAURANT



STRUCTURE

FLOORS AND ROOF



HEAVY TIMBER FRAMING



FOOTING PILES

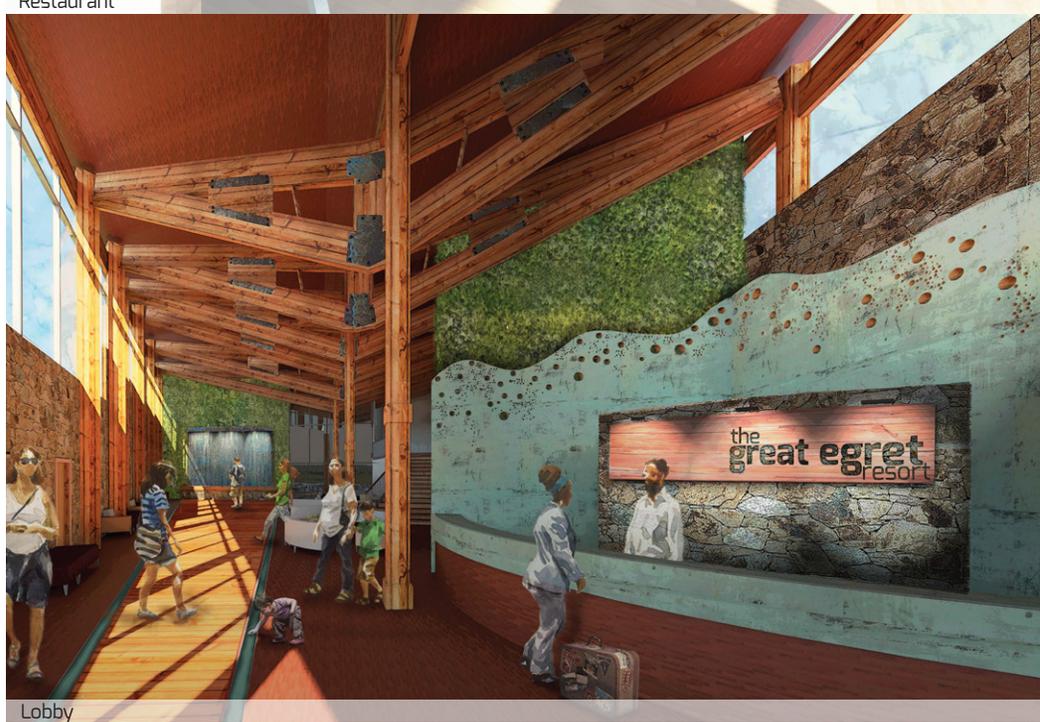


THE GREAT EGRET STRUCTURE

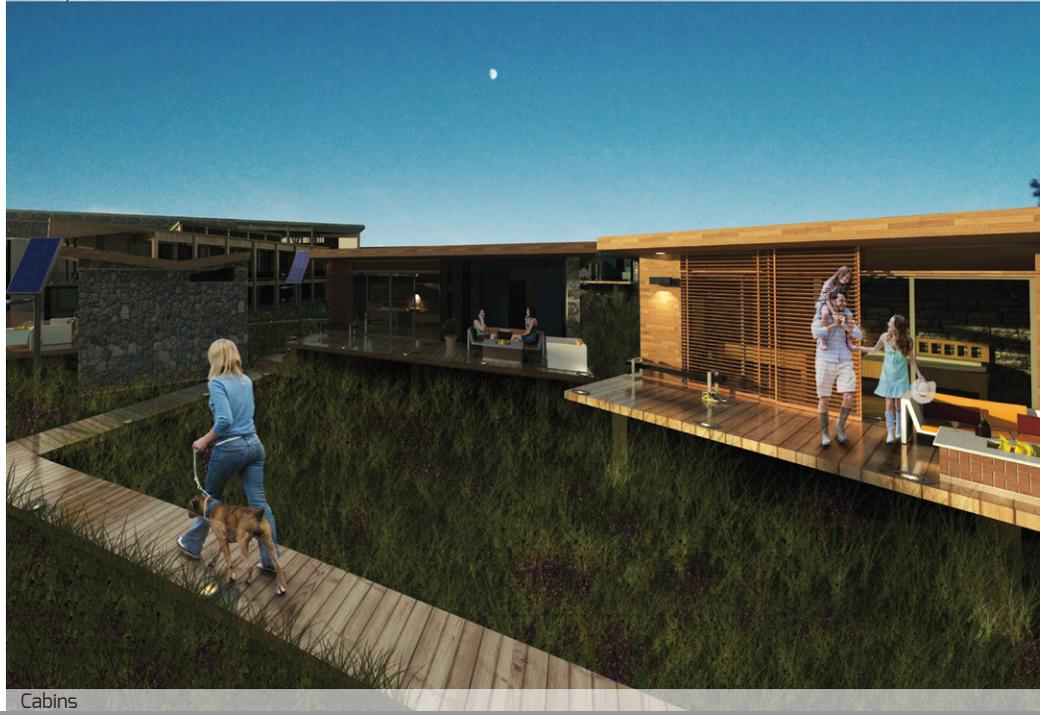


final design





Lobby



Cabins



Rooftop Restaurant and Bar



Restaurant



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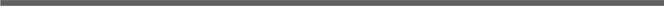
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All photographs and images were taken and created by the author of this book, Emma Wey (2012), unless otherwise noted.



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“It is the mark of an educated mind to be able
to entertain a thought without accepting it.”
-Aristotle