



recoveringLIFE(in)ARCHITECTURE

thesis project for those suffering from addiction

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recover(ing)life.with.architecture

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2 Fargo, North Dakota



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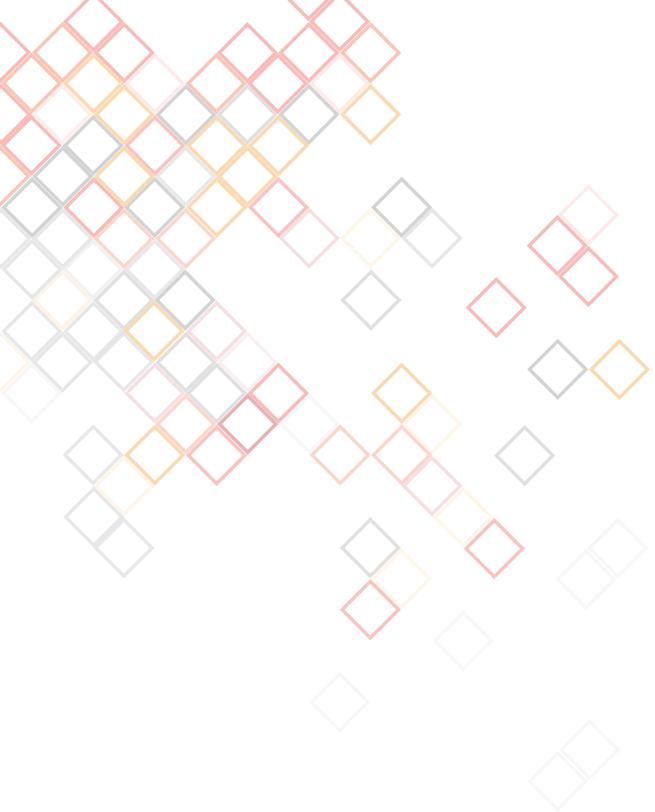
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## thesis abstract

This thesis, recover(ing)life within architecture, will focus on the question, “How can the design of a rehabilitation center assist in the care that each patient experiences and requires individually in the recovery process?” The typology for this thesis will be a restoration project in addition to taking a community in account and providing help through a rehabilitation center with a site located on the North Shore of Lake Superior in Minnesota. The guiding idea behind this investigation is, “what can a restorative attitude towards a community and a person do in a positive and effective way.” The justification behind this project is, “People who acquire the disease of addiction need a positive and nurturing environment in order for them to thrive in the lifelong process of recovery.” The theoretical premise, unifying idea, and problem statement will be researched through the course of this these project.

Keywords: Recovery, restoration, rehabilitation, addiction, hope



problem statement

problem statement

How can the design of a rehabilitation center assist in the care that each patient experiences and requires individually?

## Typology

Recovery & Rehabilitation Center

## Claim

People who acquire the disease of addiction need a positive and nurturing environment in order for them to thrive in the lifelong process of recovery.

## Project Justification

The concept that, “it will be built; they will come” is true, but the need for great, effective treatment centers is real. The need for rehabilitation centers grows every year in a variety of places around the United States dealing with different drugs, societal issues, and stigmas that exist with addiction. One of the most important steps in recovery is a proper introduction to society after recovery has taken place for a patient. This offers hope for the addict, the family, community and society as a whole.

## Unifying Idea

Restoration is an important concept from an architectural or a recovery and rehabilitation point of view. The betterment of a person in regard to health, wellness, and awareness is important to maintaining life and longevity. The center will stand as a link for the residents in the surrounding community for help and hope, and the tools to maintain a healthy and valuable life.



proposal

# the narrative

Addiction thrives in every part of the world, no matter the sex, race, age, knowledge, or wealth of a person. Addiction is blind, has no emotions, or mercy.

Surely, each one of us knows somebody or who has themselves suffered through addiction. It takes all power and ability to control yourself away from the addict and begins to control every aspect of their life, in some cases, subconsciously. The continued destructive behavior pattern and use of mood altering substances without regard for consequences, or neurological effects defines addiction and it can be different with each individual.

The number of people who would be clinically diagnosed as an addict would be difficult due to the boundaries in which addiction is viewed as. Today, there are also more people being treated for a variety of different types of addictions/issues and for different substances or behaviors. Commonly, we know of people being addicted to alcohol, drugs, or even something like smoking cigarettes; the truth is you can be addicted to just about anything and variables such as cravings, habits, stress and anxiety, dependency, and trauma all have great value when looking into an addicts motive and struggle within themselves. How do they perceive reality?

# the narrative

Many people who acquire addiction and cannot overcome it; will eventually end their life. Countless individuals die to murder, overdose, suicide, or accidental death every day when some sort of action could have taken place. For those who are fortunate to have support through their struggles and make it to the point where they are seeking help and learn to live without their addiction often experience a recovery experience at such a space I am designing.

...Sure, you might be thinking, "Why do I care about an addict? They are making these choices themselves."

Addicts make decisions, and most of them regarding their addiction, they can't control. Continuing the cycle of addiction is really the only thing an addict has complete control over. These people, who feel like there is nobody to care for them and they are existing hour by hour, day by day, need assistance.

We can't understand what somebody else has experienced without having experienced it ourselves. Maybe we will learn something from their stories, but they won't get a chance to share them unless they receive a safe, healthy, and rejuvenating recovery experience. In almost every case, an addict will need help to recover fully; and recovery is eternal. Something they need to get-in-touch with is opportunity.

# the narrative

I believe it is important to consider these individuals when designing a space for what they may require to better experience the long road to recovery and have it truly be a healing, peaceful, and therapeutic experience. From stages of panic and paranoia to withdrawal, to acceptance, addiction is unpredictable and requires boundaries to exist within but demands space to adapt also.

Additionally, I find it important to design for the environment and surroundings of the facility for the patients and residents will have an opportunity to enjoy and give back to the beautiful outdoors they are gifted with at their doorstep. I myself, have had many powerful and memorable experiences out in nature and believe that it has great and positive effects on us as people. We connect with other living things, such as the Earth.

The focus of this thesis will be to design to help those who need it and are not likely to receive it. What assists a person in design that is in such a place in life? How can their connections with natural elements, the outdoors or indoors, or in mixed spaces and what sort of stimulus and sensations can play a role in recovery.

## user/client

The user and clients of this recovery center include but are not limited to the following: psychological, counseling, and medical staff, patients, visitors, administration and facility management staff.

### Owner: A private owner/ doctors of medicine & psychology

The facility will be funded privately along with local, state, and federal funding and financial assistance. The employees and volunteers of the recovery center will be present 24/7 to ensure the safety and well-being of each patient. Parking will be available on-site for visitors and employees in addition to a drop-off/pick-up area for patients.

### Client: People with addictions

The proposed rehabilitation/recovery center will be used by primarily low-income patients with mental illness and addiction issues. The clients and patients will come from local and distant origins seeking the help, care, and, recovery of their lives. In some cases, these patients may not be seeking help willingly; the site, nature, intake, care, and staff all take part in the patient's recovery process and experience.

The recovery center will be an outpatient/inpatient facility with medical and psychological services provided to adapt to a patient's specific needs. Each individual seeking help for their challenges with addiction will work to better themselves and their community while working to integrate themselves safely back into society.

owner/patient

# major project elements

## Architectural Spaces:

### - Intake/Registration

This is the initial step upon entering the recovery center whether you are entering as a patient or a visitor. This is where you are processed as patient/resident or where you are directed to visit a friend or loved one or for more information.

### - Administration

These spaces are for professionals and employees of the facility. This includes medical, accounting, counseling, and volunteer staff. In addition to the work spaces for staff, there will also be a breakroom for employees to rejuvenate themselves.

### -Medical/Detox

This area of the facility is composed of intake/triage rooms in combination with therapy rooms for a variety of psychological/therapeutic uses. The more serious medical cases require more technical and capable medical facilities nearby.

# major project elements

## -Living Spaces

These long-term residential spaces are for inpatient treatment. Living spaces would be dormitory style with a more private and tranquil environment to reflect back on themselves as well as working and living with others. Building positive and healthy relationships in a supportive environment is vital for treatment and success with addiction.

## -Learning/Resource

These particular spaces will be used for larger group gatherings, classes, meetings, and spaces where learning and more living can take place. Some of the learning spaces will be open to the public, or for people attending meetings or classes within the facility. These spaces will also include more of the social spaces where patients are able to enjoy their free time in a healthy and constructive way.

## - Service

Service spaces will include maintenance room, storage closets, loading/unloading dock, drop-off/pick-up areas, and spaces for mechanical and any technical spaces required in the program.

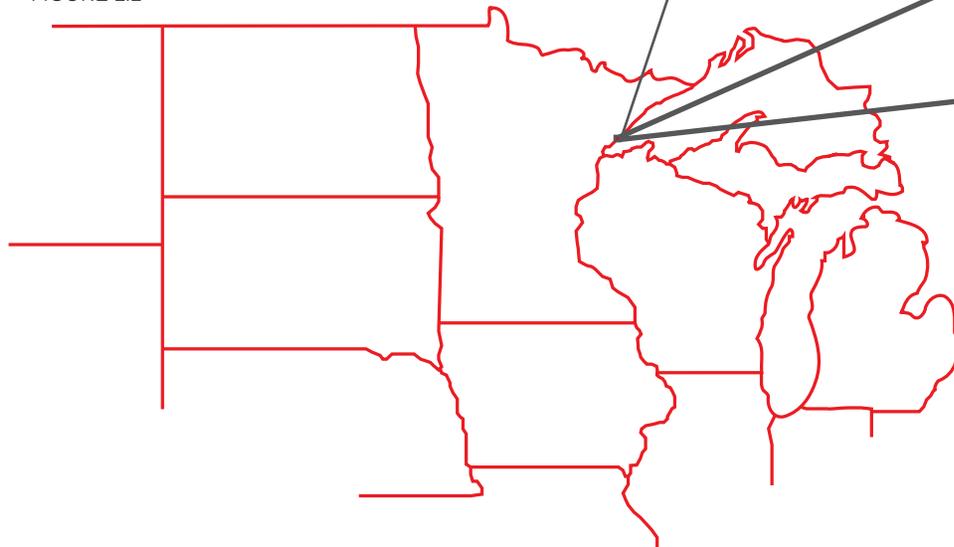
# site information

## regional

the north shore - lake superior, minnesota

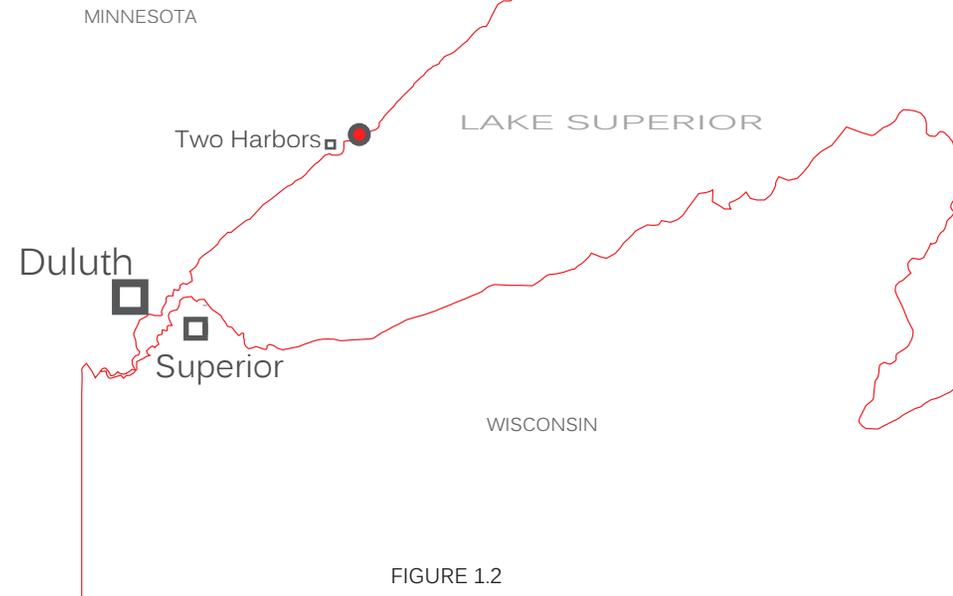
The description for the site is located in the northern- Midwest of the United States, located along the shore of the largest lake on Earth, Lake Superior. Water will play a large role in the way the design is integrated in the site.

FIGURE 1.1



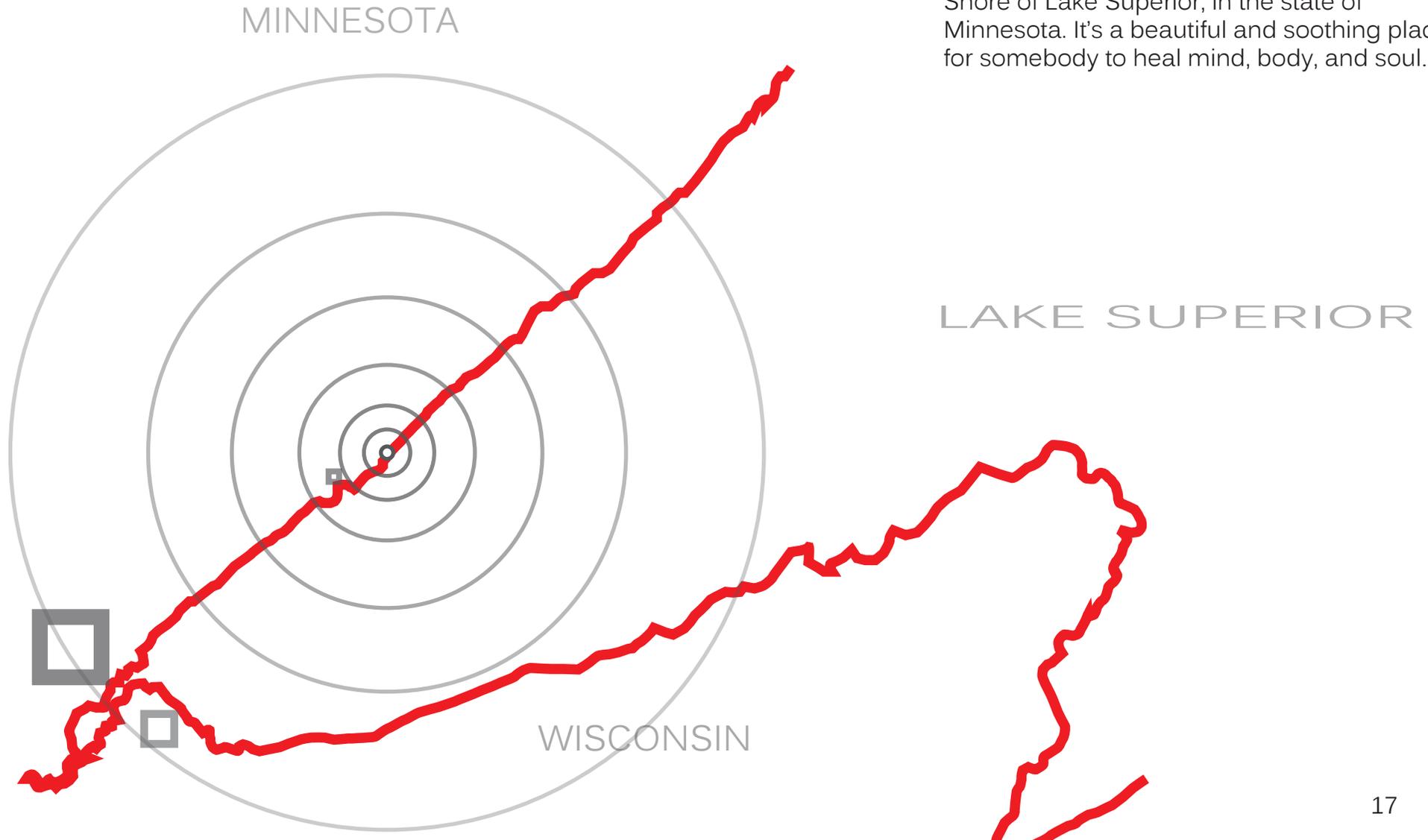
## local

Duluth is the largest city in the greater region and one of Minnesota's largest cities and a major port city located on the Great Lakes. The proposed site is located in a pristine rural area. Hwy 61 runs up and down the shore of Lake Superior, I am specifically interested in larger spaces away from immediate residences and where the highway leaves the coast.



# site information

FIGURE 1.3

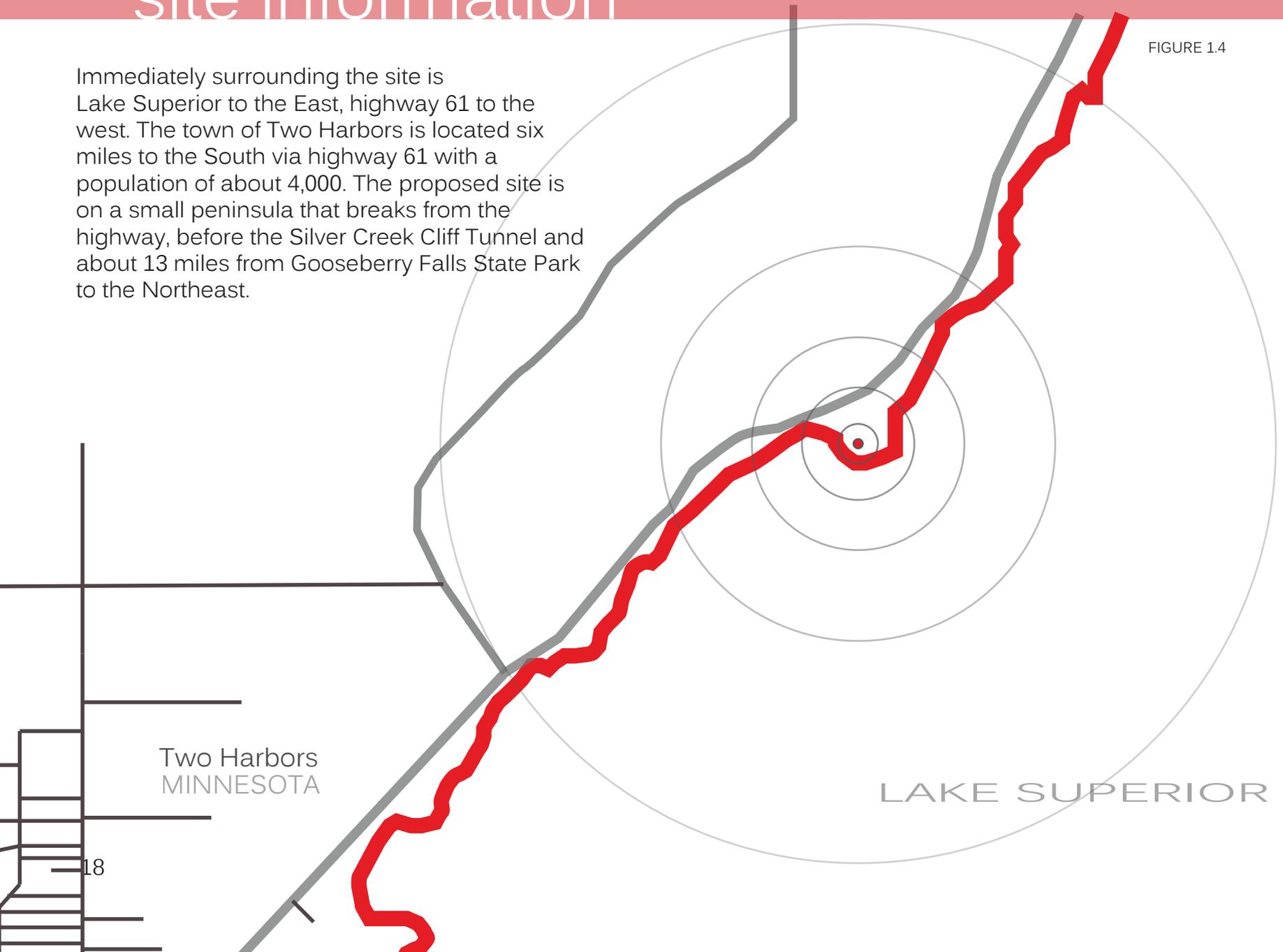


The site for this thesis project is located six miles northeast of Two Harbors on the North Shore of Lake Superior, in the state of Minnesota. It's a beautiful and soothing place for somebody to heal mind, body, and soul.

# site information

Immediately surrounding the site is Lake Superior to the East, highway 61 to the west. The town of Two Harbors is located six miles to the South via highway 61 with a population of about 4,000. The proposed site is on a small peninsula that breaks from the highway, before the Silver Creek Cliff Tunnel and about 13 miles from Gooseberry Falls State Park to the Northeast.

FIGURE 1.4



# emphasis

The focus of this thesis project will look into how a site and structure influence a person's ability to experience the recovery process. As an architect it will be a goal to change the perceptions of those with addiction and to educate the public on the important subject that is present everywhere where humans exist. It will be important to design with senses and emotions in mind, in addition to natural elements in producing a comfortable place to **recover**.

# plan for proceeding

## Research Direction

Research will be conducted in all the following areas: theoretical premise, unifying idea, project typology, history, site analysis, and programmatic needs.

## Design Methodology

I will utilize a variety of methodologies to learn more about historical and current issues pertaining to my thesis topic and issues relating to addiction and recovery. Material studies, vernacular design, spatial arrangements, and sustainability will all be subtopics to investigate regarding my topic.

I will use the concurrent transformative strategy and will analyze different types of media as an initial research point for further design work. My research throughout my thesis project will include quantitative and qualitative data collection and guided by the theoretical premise and unifying idea.

Data gathered during the research process will be integrated into the project at different stages, concurrently being analyzed, interpreted, and reported on throughout the research process. Data for my thesis project will be obtained by direct observation, site and case studies, local and regional surveys, and interviews with professionals in addition to a variety of rehabilitation/recovery facilities.

## Documenting the Design Process

The project will be documented digitally, using the data I collected for my thesis, a copy will be placed into the North Dakota State University Institutional Repository and a hard copy will be provided at the final thesis presentation.

# plan for proceeding

Project Documentation	88 days	1/9/13 - 5/10/13
Context Analysis	5 days	1/8/13 - 1/14/13
Conceptual Analysis	10 days	1/8/13 - 1/21/13
Spatial Analysis	10 days	1/11/13 - 1/24/13
ECS Passive Analysis	5 days	1/21/13 - 1/25/13
ECS Active Analysis	4 days	1/28/13 - 1/31/13
Structural Development	10 days	1/16/13 - 1/29/13
Context Redevelopment	5 days	2/18/13 - 2/22/13
Floor Plan Development	6 days	1/16/13 - 1/23/13
Envelope Development	14 days	1/30/13 - 2/18/13
Materials Development	12 days	2/4/13 - 2/19/13
Structure Redevelopment	8 days	2/18/13 - 2/27/13
Section Development	10 days	2/20/13 - 3/5/13
Floor Plan Redevelopment	5 days	2/18/13 - 2/22/13
Midterm Reviews	5 days	3/4/13 - 3/8/13
Project Revisions	12 days	3/11/13 - 3/26/13
Rendering/Graphics	21 days	3/15/13 - 4/12/13
Presentation Layout	7 days	3/15/13 - 3/25/13
Preparation for Presentations	8 days	4/5/13 - 4/16/13
CD of Boards to Thesis Advisor	0 days	4/15/13 - 4/15/13
Plotting and Model Building	12 days	4/5/13 - 4/22/13
Exhibits Installed	0 days	4/25/13 - 4/25/13
Thesis Exhibit Opens	3 days	4/23/13 - 4/25/13
Final Thesis Reviews	6 days	4/25/13 - 5/2/13
CD of Final Thesis Documentation to Instructor	0 days	5/6/13 - 5/6/13
Final Thesis Document Due	0 days	5/10/13 - 5/10/13
Commencement	0 days	5/11/13 - 5/11/13

# plan for proceeding

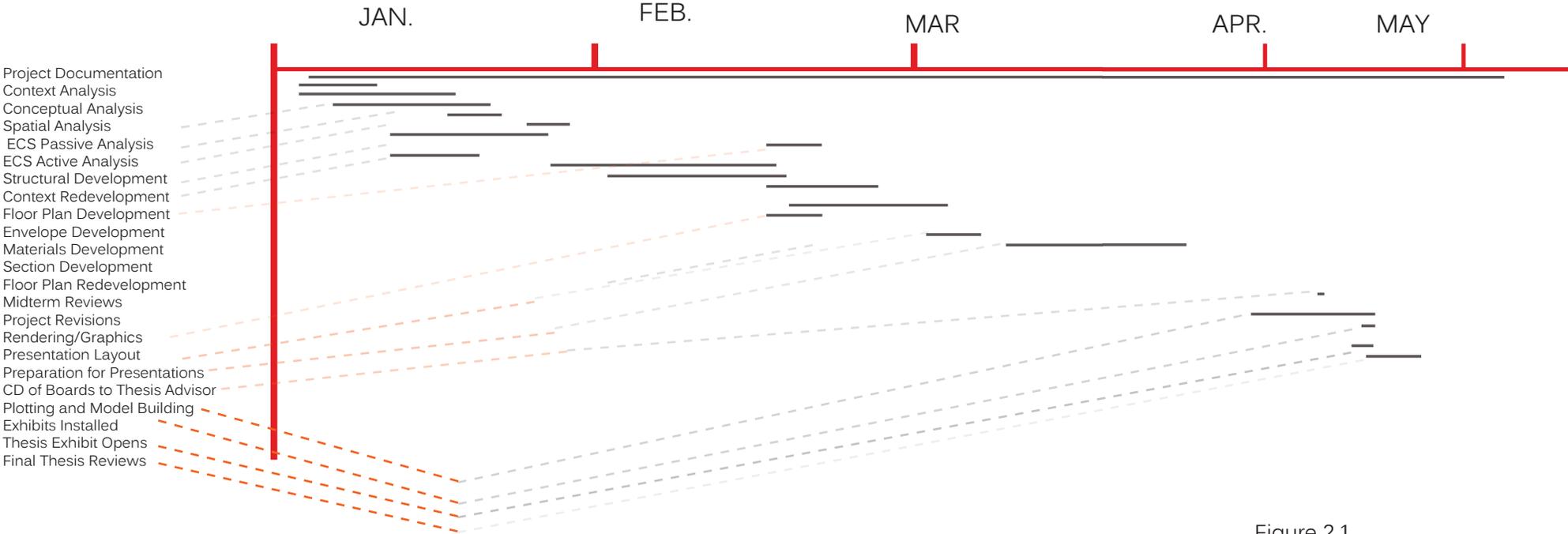


Figure 2.1

# experience

## Previous Studio Experience

### Second Year

Fall 2009: Heather Fischer

Tea House – Fargo, ND

Minneapolis Rowing Club – Minneapolis, MN

Spring 2010: Joan Vorderbruggen

Montessori School – Fargo, ND

Dwelling Project – Cripple Creek, CO

Birdhouse Project – Plains Art Museum Exhibit – Honorable Mention

### Third Year

Fall 2010: Cindy Urness

Downtown Fargo Community Co-op – Fargo, ND

NDSU Downtown Wellness Center – Fargo, ND

Spring 2011: Regin Schwaen

Design Competition – Homeless Shelter Concept – Seattle, WA

Triangle Park Project – Fargo, ND

### Fourth Year

Fall 2011: Frank Kratky

High-rise Design – San Francisco, CA

KKE/DLR Design Competition

Spring 2012: Paul Gleye

Semester Abroad: Lille, France

Urban Design

### Fifth Year

Fall 2012: Regin Schwaen

North Dakota Museum of Art Addition – Grand Forks, ND

Thesis Prep



# program document

## Theoretical Premise/Unifying Idea Research

The brain is a dynamic, beautiful, and an evolving organ in our body that controls much of what we think or act upon in daily life. Our brains are precious and complex components of our body that can do things that we are relatively beginning to understand and can change and adapt to its body's environment, drives, and its needs.

“Since the existence of humans, we have been known to seek out pleasure and activities with positive outcomes.” (ASAM) When our brains are developing and we learn through observation and knowledge, we use memory and our complex cognitive and abstract/definite decision (both conscious and subconscious) making skills to act in a way that will reward a need or in some cases a desire. This process allows us to live and learn with our environment and to adapt to changes that take place around us. It is important to look into how humans have evolved over time through which we have been exposed to different variables that could change our way of thinking or living. Humans and most living creatures are predisposed with the ability to make movements, functions, and decisions that keep us alive. The theories of psychology, Nature vs. Nurture, and natural selection also apply to the history of how we have studied human behavior.

## Theoretical Premise/Unifying Idea Research

### ADDICTION

Today, addiction is a well-known and prevalent social issue that is present everywhere on Earth. Has addiction always been present along with the human race? What has changed with our culture and society where addiction is more of a problem today? These are some questions I hope to answer through research and throughout my thesis investigation.

“Addiction is a chronic but treatable brain disease.” (Rasmussen) Addressing addiction as a condition or disease rather than a choice or a personal issue is vital to the success in recovery and abstinence. When reviewing data about addiction, it is important to consider the broad definitions related to the term. “Define addiction concepts in ways that can be observed and measured

There are several different types of addiction that involve different characteristics of behavior as well as measurable data such as hormones, neurotransmitters, and brain activity. A person can be addicted to alcohol/drugs, exercise, gambling, pornography, as well as an endless list of other behavioral and chemical addictions. These types of addictions all have different attributes but some happen to work in the same way and affect the same part of the brain. In addition to looking into the psychological components of addiction, there are also “physiological components that involve not only the brain but the body as a whole and can make a particular addiction even more difficult to overcome.” (ASAM)

### THE ADDICT

It's not known how many people live with addiction as it is widely unreported or unseen in some cases. "Years ago, people believed that addiction was a personality problem or a moral weakness." (Hollander) Today, addiction is viewed as and treated like a disease which is required for appropriate care. Looking into how society has labeled addicts with a negative stigma gives reason for unexplained or unreasonable behavior by generalized past addict behavior.

The dynamic of understanding others or one's self enough to be aware of a struggle with addiction can be more elusive than one might think. An addict will act in ways which mask their problem and their brain is rewiring itself in order to keep control over the pleasure seeking, reasoning, and decision making parts of the brain. This hijacking of the mind and body will eventually result in the shutting down of proper thinking and reasoning skills. Different addictions/addicts have different euphoric feelings, triggers, cravings, and withdrawal symptoms. This is surely not an exhaustive list but starts to talk about how each case of addiction can be unique in qualities and also how it is diagnosed and treated.

## Theoretical Premise/Unifying Idea Research

### CULTURE & SOCIETY

The environment in which we grow and learn about the world around us greatly effects how we will think and act in return. Humans are like observant sponges and most of what we see goes unnoticed as stimulus to our conscious selves. Same goes for much of our own human responses and systems. Your upbringing as a child and education has been studied and show great correlation between addiction and sobriety. How does one person become and addict over another? Some people argue that people are born to be an addict genetically or they are pre-disposed to be more susceptible to falling into strong ties of addiction.

Our current views on the problem also gives us reason to act towards addiction and mental disorders/behavior in different ways. Negative attitudes and stigmas that go with addiction often make it difficult for the addict to seek help or to stay clean over time. The fact of this major problem in our culture is the lack of understanding and education when it comes to what addiction really is, how we can treat it effectively, how we can handle addiction with a family member or loved one, and that concept of addiction is actually a natural occurrence for a human to experience.

## Theoretical Premise/Unifying Idea Research

### EVOLUTION OF ADDICTION

When attempting to understand what addiction is, it is necessary to look into the past of how we as a society got to this point where we are now living with influences from advances in technology, medicine, social media, commercial and consumerism are just a few examples of some major factor in the “why” of addiction and how its become a greater part of our lives today.

Scientists have been researching how behavior or substances have affected us as humans, or as Stanford School of Medicine Professor, Tammy Saah says, “mammals”, through evolution.

“It’s a matter of science and biology and a mess of other factors that we have in our lives today.” (Saah)

Researchers have found that psychotropic drugs have been used for thousands if not perhaps millions of years. “Ranging from basic herbal plants, soaked bark, nicotine to the ancient use of cocaine, the reason for use any substance that would be considered a drug back then would differ from today.”(Saah) Psychologists, sociologists, anthropologists, and archeologists have been exploring ancient remains and civilizations with artifacts proving decay of psychotropic substances or “drugs” inside bone matter and surrounding their burial site.

## Theoretical Premise/Unifying Idea Research

Historically, the use of mind-altering substances has been for more religious, spiritual, or medical uses. Many ancient burial grounds found in mountains in South America were littered with different types of amphetamines, nicotine, and psychedelic plants. It is thought that a certain tribe would even ingest a powerful psychoactive drug if gravely ill, or when passing to transfer spirits to the next world. Through time, scientists and researchers have found that changes in our environment have changed the way we perceive, act, and most of all, feel in many situations.

Professor Saah talks about how humans used to perform certain actions to feel what we would call “happy” or “feels good”. For a person thousands of years in our past, they would have described it euphoria. A lot of the innate drives we are born with existed long before us, since that’s where we’ve evolved from, our ancestors. If raising their health, or Saah calls, “fitness” gave a person a natural feeling of euphoria that could outlast the duration of any drug today. That surprised me but makes sense; after running, or eating healthy, we feel good. Right? Is it physiological or psychosocial? While researching, I came up with many questions like that.

“Psychoactive drugs induce emotions that at one point in mammalian evolutionary history signaled increased fitness, not happiness.” (Saah)

## Theoretical Premise/Unifying Idea Research

Over time, Saah has concluded that humans have lost our ability to sense like a human could back in that time period. I would agree, but also would consider and recall a person's life was very different also. I don't know if anybody could say ones life would be better or worse from then to now. Nobody has the ability to make such a claim. Perceptions were different as people were and are different. Today, we all view and perceive things differently if a little, if not sometimes greatly! Professor Saah says,

“...introduction of industrialization over time with the continued evolution of substances and chemicals in and out of our bodies, humans are bound to be driven to use something that makes them feel different or in this case, good.”  
(Saah)

Through further investigation Saah learned that we could have evolved our ways of acting and thinking through this confusion within ourselves to try and seek an action, or an effect to cause a certain feeling or reward. She also researched a lot into motivation, neurotransmitters, and drives to replace feelings of being “not good” or uncomfortable. This is an interesting result to her research; this gives meaning to where and why addiction came from and how it came to be something like it is today.

## Theoretical Premise/Unifying Idea Research

### THERAPY CONCEPT

The idea of assisting people renewing themselves and their way of thinking and living is one of the only known ways to ensure the health and safety of people with addictions or some mental illnesses. We should gather our resources, time, and energy to move our attention towards eradicating the source of the problem. Sure, erasing addiction from life isn't a reality but it can be a start. Less people living with addiction today means less people continuing the cycle from families, friends, and future generations to come.

Working with individuals on a one-on-one basis instead of shoving negative consequences consistently down troubled peoples throats would be better for the person themselves as well as our communities who don't need to pay and support criminals who keep ending up back in jail or prison because they aren't seeking or receiving any help for their own issues or behavior. I believe with advances in psychology, sociology, medicine, and design will pave way for new strategies and ways of thinking for the overall treatment and plan to help control and solve the addiction problem that is too common in too many places around the world.

"...we are forced as a global society to re-evaluate the criminalization of drug use and addiction throughout world. In general, social drug policies have been conservative and unyielding. Most often, addicts are left to feed their addiction through illegal means of acquiring drugs. As a result of conservative influence in national politics, a "tough on drugs" philosophy that stresses zero tolerance, law enforcement, and abstinence has been adopted. This philosophy neglects the need for medical and psychological treatment of substance addiction."

- United Nations 2004

## Theoretical Premise/Unifying Idea Research SUMMARY

In starting out the research phase of this topic for thesis, I found it to be a lot more elusive and holds many different ways of thinking and avenues of origin or reason. I find them all important but was more interested in finding facts about the history of addiction and how it was viewed in the past and in our more recent past. I would think that a lot of what I had felt about addiction before was taken from my own personal experiences with family or friends struggling with an addiction problem and also what I have absorbed from media all around me. It's a much more complex subject as I was expecting but was surprised to come across some findings. I feel as though I have a better grasp on understanding what addiction is and potentially why it is such a problem or in some cases, an epidemic that needs desperate attention and change.

From a person of today, I think it would be more beneficial and less wasteful and destructive in countless ways to give more effort into helping and healing people who need help, addicts. It's interesting as some of the first documented cases or talks of addiction exist in the Bible. (Corinthians 10, Luke 16, Paul 12, Romans 7) It's also more interesting to try to think and discuss what took place over that long period of time to create a social problem that we could experience around us.

## Theoretical Premise/Unifying Idea Research

### SUMMARY

Working towards solutions in the field of design I have tried to conceive other ways of helping people with addictions, or people with mental illness. What about a space can promote healing? (Both physically, mentally, emotionally, etc...) I find sense of place and environment very strong and important when taking architecture into account with spaces that addicts or mentally disabled/ill people would be using. The discussion of color, different forms and ways of displaying light, views, and specific use of certain materials or position of spaces can create a special living, learning, and working environment to thrive in.

Therapy environments will be places I will focus on creating programmatically, but not aesthetically. A lot of our healthcare and institutional facilities feel cold and impersonal where it is difficult if not impossible to find comfort, let alone heal or recover from addiction. RECOVERY & RESTORATION will be my guiding principles in furthering research and starting further typological analysis. Creating a restorative atmosphere for an addict or person in need can give them hope to restore themselves and their own lives. It will also be significant to the success and mission of the recovery center to be a link for the community and people for education with mental illness, conditions, or addictions of any kind.

# typological research

St. John's Recovery Center - Toronto, CA

Hockerton Housing Project - Hockerton, UK

Social Health Center - Isora, SP

# typological research

St. John's Recovery Center  
Hugh Allward Architects  
Toronto, ON



Toronto, Canada

The largest single site for a health facility in Canada is the St. John's Recovery Hospital and Centre located in downtown Toronto (also known to be named "Sunnybrook Hospital"). The hospital has plenty of history along with many different types of specialties since the grounds and growing medical community are expanding at an incredible rate.

St. John's was first started in the 1940's and had it's first period of growth after WWII where many veterans received post-war treatment both physically and mentally. The new and expansive hospital was a symbol for Canada's veterans and was a sought after destination for people all over the Eastern region of Canada. Located in the dense urban area of downtown Toronto, the hospital also has experienced some interesting and important growth periods where their building, patients, and also sites were beginning to take shape in what they are today.

# typological research

St. John's Recovery Center  
Hugh Allward Architects  
Toronto, ON

After decades of operation the hospital began to start its affiliation with the University of Toronto where it also has gained most of its growth in the community from. Here, the hospital grew physically around the city and region, and also grew with the number of patients it was seeing and servicing. Through the 1970-90's, the hospital added on a cancer, trauma, cardiovascular, and mental health facilities. This growth and change is something I am interested in as a case study as well as its direct typology. I find its solution to thrive in a downtown urban community and maintain a sense of health and wellness is unique and something that the citizens of Canada appreciate greatly. (And it shows!)

The design and development of this hospital and health system is a beneficial one to study due to its materiality in the building and how they have improved their construction techniques from the hospitals conception.



FIGURE 3.1

# typological research

St. John's Recovery Center  
Hugh Allward Architects  
Toronto, ON



Health facilities are vital to study and different in ways that they are always changing and evolving spaces; yet they need to stick to strict guidelines and functions.

Sunnybrook's main building holds over 1,200 beds for the public and 600+ beds for veterans. The hospital also sees over a million patients annually and is one of the communities largest employers. Sunnybrook/St. John's is viewed as one of Canada's best healthcare facilities in terms of care, cleanliness, environment and atmosphere, accessibility, and patient/professional ratios.

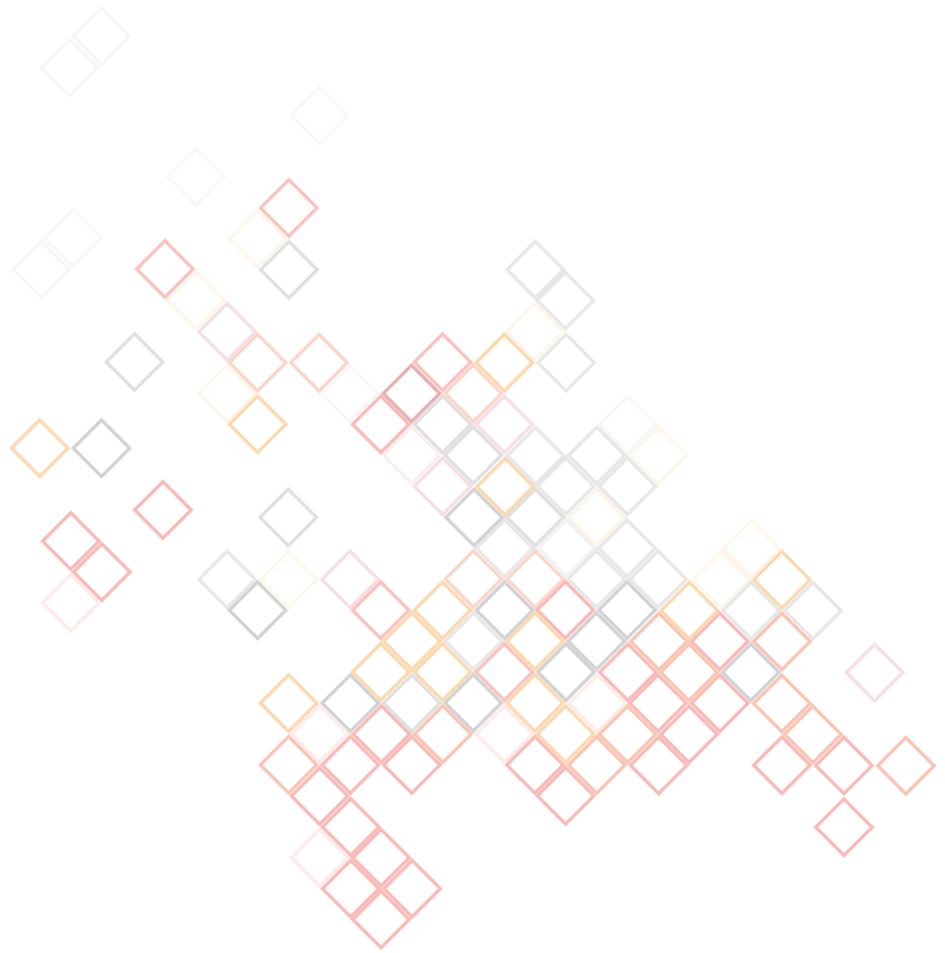
Design Programs for health facilities seem to be the most complex to organize along with creating a pleasant and safe, healthy environment. Taking the modularity of the design here, and using it into a site or landscape such as the north shore could be a powerful statement. Of course scale will have to be addressed and reduced.

FIGURE 3.2

# typological research

St. John's Recovery Center  
Hugh Allward Architects  
Toronto, ON - Canada

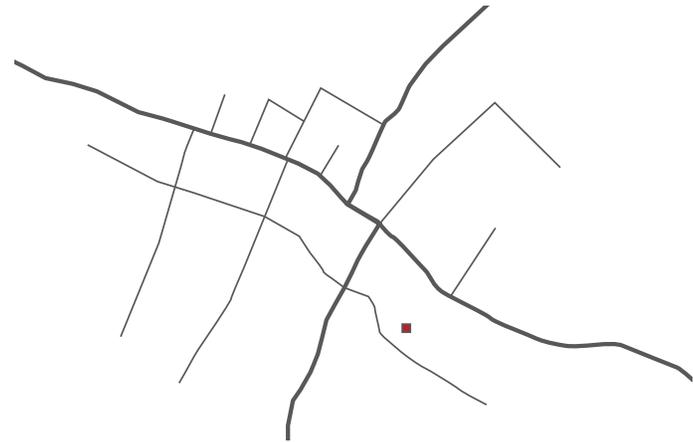
More specifically, mental health facilities are a newer and changing environment as well. These mental health facilities, within the St. John's Healthcare System, are also known as satellite systems that operate independently within the federal healthcare system of Ontario and Canada. Studying how these smaller facilities operate and work with a larger system is important to learn how a mental health and recovery center would exist on its own, privately, or in conjunction with a larger healthcare provider or company. In many cases, the recovery facility is owned and operated privately such as a firm would be with a team of professionals, doctors, counselors, nurses, technicians, receptionists, trainees, etc. Taking a look at how a larger facility such as this one differs in use/function than a smaller recovery center will be useful when working in planning the program and how spaces are used for different masses of people in addition to location and desired atmosphere and experience.



# typological research

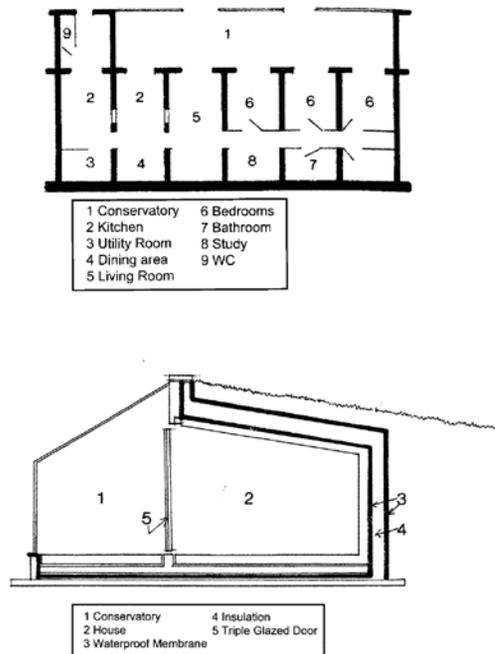
St. John's Recovery Center  
Hugh Allward Architects  
Toronto, ON - Canada

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# typological research

Hockerton Housing Project  
Brenda and Dale Vale Architects  
Hockerton, United Kingdom



Completed in 1998, the Hockerton Housing Project was designed by Brenda and Dale Vale. This rural grouping of homes was thought of as a new way of living outside of the normal or perhaps “easy” way to do things. In the long run, saving energy and materials has paid off enormously and the vernacular detail and design makes it a special place to call home. To the North side of this linear system of spaces, the structure is earth-sheltered, making the back of the residence flow elegantly with the landscape. Homes are designed in a way where a thermal mass catches energy from the sun to heat the building without damaging the environment or costing anything after construction. Besides the structures of these homes, the land they inhabit is home to the plants and animals they raise to be self-sufficient.

FIGURE 3.3

# typological research

Hockerton Housing Project  
Brenda and Dale Vale Architects  
Hockerton, United Kingdom

The strategies used in this small housing development are not new or unheard of; they are used in an appropriate manner where they can demonstrate the work and effectiveness they were designed for. Wind and more solar energy is used to provide to energy needed elsewhere. This small housing community also captures, stores, uses, and disposes of their own water and waste from rainwater to a on-site compost site and reed bed septic tank. This all may sound a little rough for a lifestyle, but it's about educating yourself and the resources and environment we use and live in everyday. This new lifestyle of perspective on living is also an interesting attribute of this concept. Providing certain utilities, spaces, or resources, allows for an individual to live and experience life in a new way. I would be certain that this idea can be applied to a recovery center and allow its patients and residents to view life in a different way and with a different attitude and sense of acceptance.



# typological research



Hockerton Housing Project  
Brenda and Dale Vale Architects  
Hockerton, United Kingdom

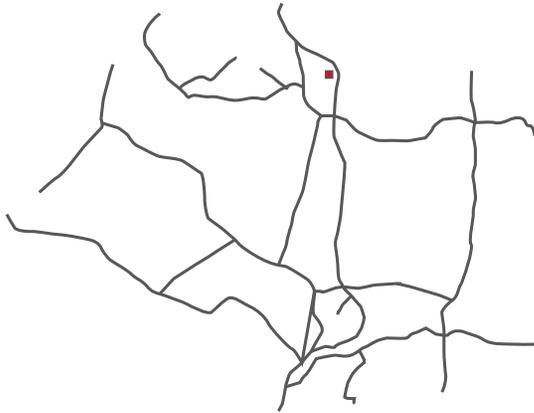
A neighborhood or community is another strong, positive characteristic about this project. Each resident owns their own homes but are also a part of a co-op that works with the raising, production, and distribution of all the foods, energy, and resources that are shared and gathered by the group of residents as a whole. Also, people are asked to volunteer and organize events in this and nearby communities for education and health in humanity.





# typological research

Social Health Center  
Estudio Lavin S.L. Architects  
Isora, Spain



The Social Health Center located on the island of Isora in Spain is a case study which displays different aspects that I would like to investigate further as the design process continues. Relationships to bodies of water, community, and a personal experience within a space are all subjects I am interested in researching within this particular type of center.

Isora is a small town of about 18,000 residents on an island which stands as one of the Canary Islands Southwest of the coast of Spain and directly West from the coast of Africa. Its mountainous terrain and warm climate gives this site different opportunities to work with climate, environment, and local communities, being such a remote location. This case study is also important to my thesis because it relates to the water since it looks over the Atlantic Ocean and takes advantage of countless design and sustainable opportunities given here in Isora. Living with your environment and climate is a natural way of life here, something that isn't always easy for others to understand.

# typological research

Social Health Center  
Estudio Lavin S.L. Architects  
Isora, Spain

The design of the project is separated into a collection of different spaces which serve different functions. The way these spaces work together in a three dimensional method makes this case study a useful one by giving attention to how different spaces can work with one another or be shared. Beyond the structure and composition of spaces, it has fantastic views of the hillside and the small city of Isora. Recreation and living spaces are located facing the sun on the Southwestern side of the building and meeting and gathering spaces located on the upper floor to be able to have good angles and lines of view against the surrounding environment. I think a strong part of this project that is unique is it's way of handling its city-like environment on one side of the building, and a blank canvas of the horizon and the Atlantic Ocean. Careful consideration for spatial organization made this possible with its given site limitation and restrictions.

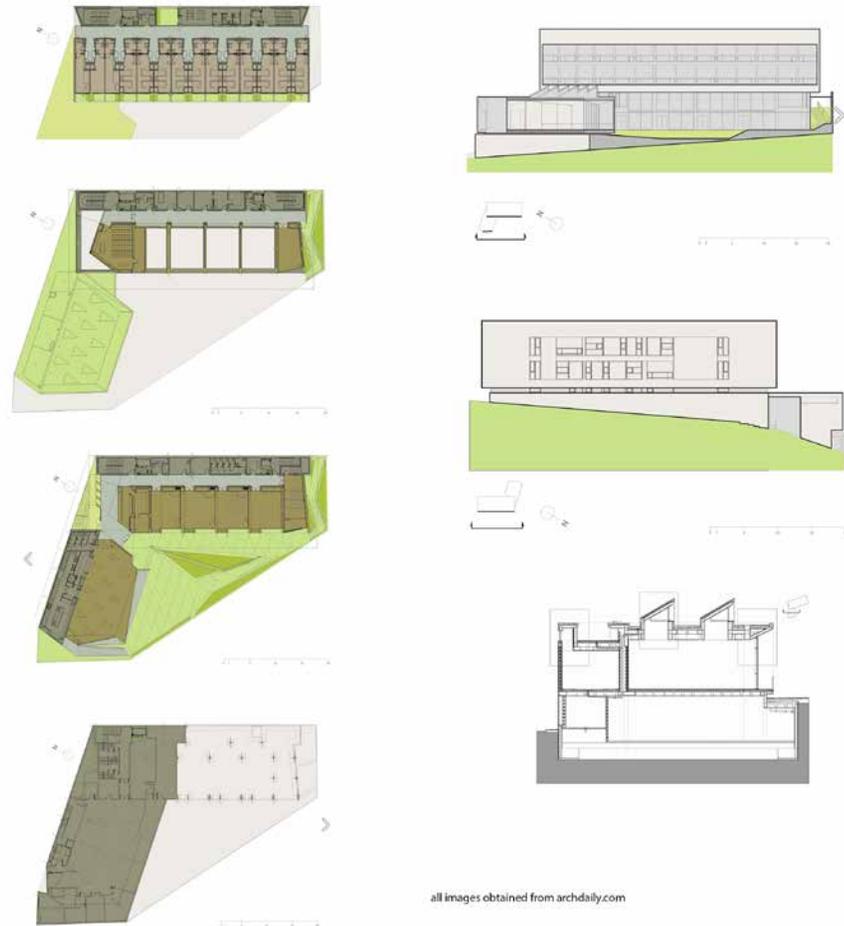
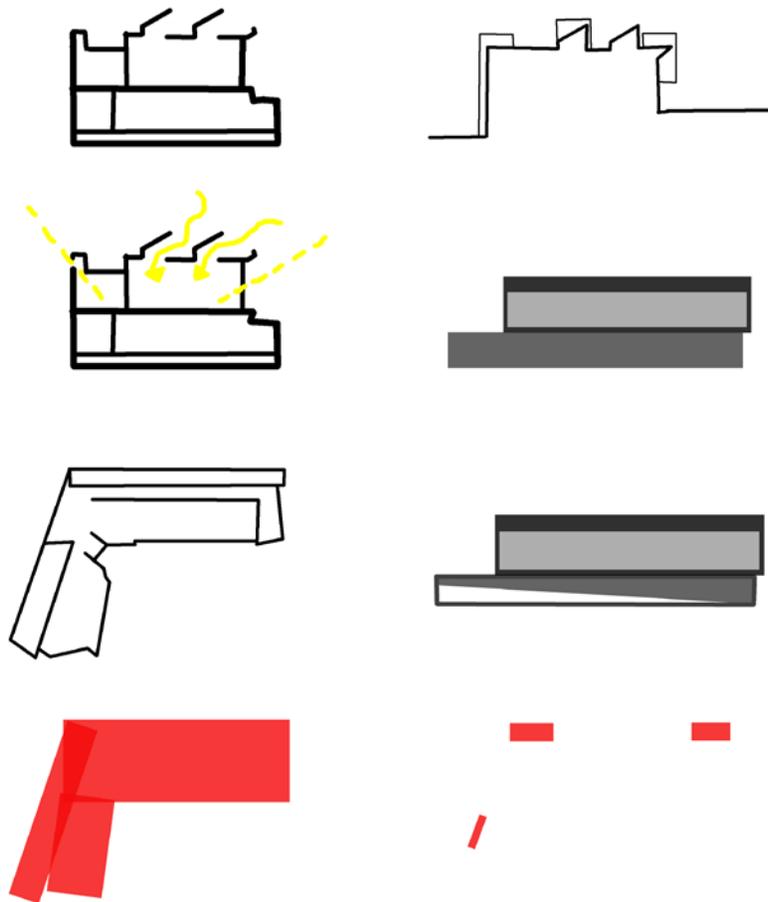


FIGURE 3.4

# typological research

Social Health Center  
Estudio Lavin S.L. Architects  
Isora, Spain



“Establishing relationships between residents and the natural environment around them is crucial in healing and overcoming hardships both physically and mentally.” (Lavin) A variety of colors are used to keep the feeling light and fresh with all the available sunlight. Lavin also studied the use and effectiveness of color on mood, function, and cognitive capabilities. Outdoor spaces are as equally as important in a facility such as this one since its located in such a warm and mild climate and the research and study of how the natural world around us has a great benefit for our health, well-being, and recovery or for a mental condition or illness. These shared types of spaces allow for them to be used for a variety of uses such as shares terraces which let residences go outdoors on upper levels which connects them to the breathtaking scenery all around them but disconnects them from the immediate urban distractions that exist around the site.



## typological research SUMMARY

The three case studies researched here in this manual give way to some of the problems and types of situations I may have to work with and design for, that I had never thought about initially. Each site and project has different obstacles to overcome and to try to take advantage of what is available whether it is resources or energy. I chose these particular case studies because they all were relevant to my proposed thesis project and were similar to use or function in some way. I also looked for ways they designed for views, emotions and senses, energy conservation, and sites that were located nearby water. I believe it would also be beneficial to continue looks and preparing thorough case studies with to find a wider array of projects to take elements from and learn how they solved a lot of the problems the designers faced.

The St. John's Recovery Center (Sunnybrook) was the largest program out of the three selected and was also the most generalized towards healthcare facilities. It houses many standard and general hospital and clinical departments along with a number of specialized fields including cancer treatment, trauma, birth complications, cardiovascular issues, and their own on-site lab. The second study, the Hockerton Housing Project, didn't directly relate to healthcare as is a relatively small scaled program since it stands as a small community housing development. I found it to be helpful to look into housing facilities as a part of my research since it will be required to have residents/patients live in a inpatient type space in the recov-

## typological research SUMMARY

Each of these cases also address different ways of using materials, energy and resources, and their surrounding environment or community to give back to or even block or design away from. I found the way the design and construction of the housing project in Hockerton was treated more of an entire living and lifestyle change making the motives behind design decision more powerful and give them more meaning that can be seen and displayed in the way they are self-sufficient on their own. This was an interesting find, as it's not something I'm entirely aiming for in my recovery center but changing ones lifestyle through the spaces they live, work, and learn in can change much more about ourselves, each other and our environment.

As found in research earlier, environment deals greatly with how we can live and interact with other people, how we feel, act, and live. I have discovered some bits of inspiration from working with materials in certain landscapes and climates, the importance of color and natural light, smart spatial design and different compositions that can adapt or change with time or change of function. Connecting people to the environment in which they live is a powerful concept as well as allowing a person struggling with themselves to be able to see life and the things they have in it, in a different perspective.

historical context

# historical context

Healthcare has a long history that has taken place since the existence of humans more or less. With time and technology we have adapted to our environment to produce what we have for our vision of health and care becoming one entity. Humans are beginning to populate this planet quickly and more problems will arise with this fact. For this reason, our future in healthcare is vital to how we will live in our future generations and also we as a human race taking responsibility for responding to our natural environments, communities, and our lifestyle.

For my thesis project, the term “healthcare” is too vague. My thesis will be focusing more specially on mental health and recovery facilities. Mental health and addiction are important subfields of healthcare to consider because they are growing in need and are also often ignored or viewed in a negative manner. People with mental or addiction issues are usually unable to help themselves or see the situation they are in or how to change it. Their disease has rewired their brain to allow their addiction or mental condition to flourish and control them (subconsciously) requiring some sort of intervention.

# historical context

Internationally many different drugs and substances (as well as many other non-psychoactive drugs) were made illegal for sale, trade, manufacture, etc. Some laws were initially enacted for religious reasons, others were used more for political power over others within a country or power over other countries by control of access and trade routes. This can be seen through history in South and Central America, most predominantly in Columbia where more than 610 metric tons of cocaine was estimated to be produced in 2006 alone. This number is a lower number from previous years as the Revolutionary Armed Forces of Columbia with the help of Peru and Bolivia are starting to help eradicate some major drug cartel routes and stashes. Money seems to be a big motivator for many things around the world. Diamonds, clothing, cars, sex, drugs, it's all fueled by money on a global market. Today, it seems possible to obtain almost anything over the internet from anyplace in the world. We are all interconnected in ways we barely are aware of day to day and these close links are making issues on a global scale a major problem.

# historical context

Historically, the United States started its negative relationship with drugs and crime in the turn of the century with the prohibition of alcohol as well as the Marijuana Tax Act. Over generations of time, old laws had been overturned and times were different here at home. Americans were doing quite well on the global market after WWII until a global phenomenon occurred known as the counter-culture movement was born. This was a youth-led group of believers and followers who resided from all over the world which also took place during another worldwide event taking place which America decided to be heavily involved in. This turn in America's history fueled a drug epidemic that was on it's way around the world. Years later, the United States with much of the developed world set international laws in place to make the use or possession of many drugs illegal on many levels. This changed the stage for the people of America and much of the world as our problems grew, so did our addictions and expectations of what we WANT, rather than what we NEED.

# historical context

The effort to help people with addiction or mental issues has been a big undertaking on a global level for some time now. I'm not thinking the effort isn't large enough; I would say we're not educating or we have misled children and adults about mental disorders, drugs, and crime, especially here at home in America.

“Americans spent \$57.3 billion on drugs in a period of five years, of which \$38 billion was on cocaine, \$9.6 billion was on heroin and \$7 billion was on marijuana.”

-The White House Office of National Drug Control

More recently, the United States made global news as it made another annual record for teens and adults abusing prescription drugs, often resulting in death. More overdoses and accidental deaths occur with prescription drug abuse than any other drug here in America. I believe we have identified some actions that could take place to help protect our children or people with mental disorders, but it's a tough scene to control when thousands of prescriptions for addictive drugs are written out and filled everyday.

## historical context

As I managed to conduct through research previously, paying attention to how addiction came about will help explain how it can be eradicated or controlled. ..." exploring the evolutionary basis of addiction would provide us with better understanding since evolution, personality, behavior and drug abuse are tightly interlinked." (Harm) People of today and a changing America should be concerned with the health and well-being of our citizens as well as the citizens of the world. There have been other nations to adopt less conservative drug enforcement laws making the gap less extreme between the people who are "good" and "bad" individuals. I'm not certain that approach would be successful here at home, but a change in awareness and education along with preventative and restorative measures for addicts could be a positive and helpful move for society.

More currently, the public and media have been more interested with people who have problems (any of kind) in wellness, mental health, and addictions. Several "reality" shows exist on television getting more people aware of our situation here at home and with our neighbors.



project document: GOALS

## Goals for the Thesis Project

Starting out this thesis project, it was a slow start and a struggle to know how to go about knowing what you should design or research. Rather, I believe it's how you feel about a particular topic or perhaps a social/cultural issue than attempting to seek out a topic alone. I began with healthcare as a typology; not satisfied in looking at all the programs and writing on the subject entirely, but knowing I was interested in the purpose of healthcare and knowing its necessary around the world in many different ways for as long as humans exist.

My thesis project follows my statement of intent, "How can the design of a rehabilitation center assist in the care that each patient experiences and requires individually?" The start of my research began with a look into the history of general healthcare and how mental health concepts were introduced into society over time. I believe it will be necessary to do more research on how environment can change and influence a human with their mood or activity in a certain space. Site, materiality, and tranquility are all terms I would like to incorporate through the design process as they are terms that should be revealed and noticed at the end of the semester or with a potential client or patient using this facility to better themselves.

## Goals for the Thesis Project

People with mental illness or struggles with addiction of any kind often have negative stigmas that go with their disease or condition that we as a society need to take responsibility for. I think it's a normal and even an innate urge to feel well and happy or content with life and yourselves where if somebody is lost within themselves, they should be able to find their way too.

With information and new ways of thinking and designing, I hope to give light to the real issue of mental illness and addiction so it can be treated and discussed appropriately and success rates for people living healthy lives continues to grow. In a professional sense, its important to be educated and up to date with social issues we deal with since architecture is a part of our daily life as well. Treatment of space can be thought of as being a physical attribute but its important to know and learn about the psychological values that can be applied to architectural design.

Personally, I have had family members with mental illness and addiction issues. These sorts of problems are extremely difficult to live with both for the addict and the entire family as it is usually a family or even a community illness. Most addicts need assistance to keep their addiction going and to keep them believing in it. I think that design, on all levels, can play a life-changing role with this global problem.

## site analysis



FIGURE 4.1

# site analysis

## Views or Vistas

The location for this thesis project has several different levels of view which are powerful and one of the main reasons this area spoke so strongly to me. Regionally, the North Shore is known for some of the highest elevation points in Minnesota as well as immediate surrounding states . In addition to high points, Minnesota's lowest point is also off the North Shore in Lake Superior. The specific site location where my recovery facility will stand is level or just above lake level with a beautiful view of the largest freshwater lake, Lake Superior. Standing on the beach of my site, you can view the bay, and the surrounding terrain to the West. It's a lovely area with driftwood littered on the sandy and rocky beach outlines the lake along the wooded land. I had a lot of opportunities to walk and explore the surrounding area and there are even extensive hiking and biking trails nearby with access to even better views.

Taking advantage of my site will be an obvious goal to pursue as a view is something you can stand and enjoy, indoors or out, any time of day, alone or with a group of people and is a inexpensive and natural way to relax and rejuvenate yourself which will be a useful feature for the purpose of my thesis.



## site analysis

### Built Features

One of the many great things about my thesis site is that it isn't immediately nearby any surrounding buildings. The closest structure would be two residences up and down the coast line that also share some of the same bay of the lake. The closest house is more than 900 feet away from the available property line with other houses sitting further away. MN HWY 61 is the road to access the site from north of Two Harbors a few miles. There is a long existing gravel road to turn into the site which leads into a vacant/for sale lakeshore lot.

### Light Quality

The days I visited my site were mostly overcast with some periods of sunshine. The sun warmed the site up a bite since I was cold experiences the strong winds off the lake. The colors of the environment seemed to be all soothing browns, greens, blues, and an occasional pop of a bright color from a special plant or flower. I would like to spend more time here during the summer when the sun shines more frequently and can experience the lake and its environment in a different way.



FIGURE 4.3

# site analysis

## Vegetation

The plant life and vegetation for my site is composed mainly of two types of tree forests, upland conifer and deciduous forests. These forests make up most of the arrowhead region of Minnesota along the Mesabi Range and Lake Superior. Coniferous trees have cones and needles and are tough to survive our harsh, long winters. These trees mostly keep their needles and cones year round. Deciduous trees are known to have a variety of shaped and colored leaves that change with seasons and are usually shed during autumn to prepare to tree for the coming cold. I also noticed plenty of plants and grasses growing in the rocks and cliffs along the lake where I'm sure wild-life flourish. The colors of the site were again more "earthy" colors and were viewed under an overcast sky. I enjoyed the palette of color present and feel like it can be translated and used in a variety of ways to create a facility that respects and responds to its surrounding site. Walking and experiencing the site by foot, you can start to feel the rocks and gravel under your feet and the sound of the trees in the wind, you start to conclude and tranquil and peaceful environment which will also feel safe for many people who don't already feel that way.

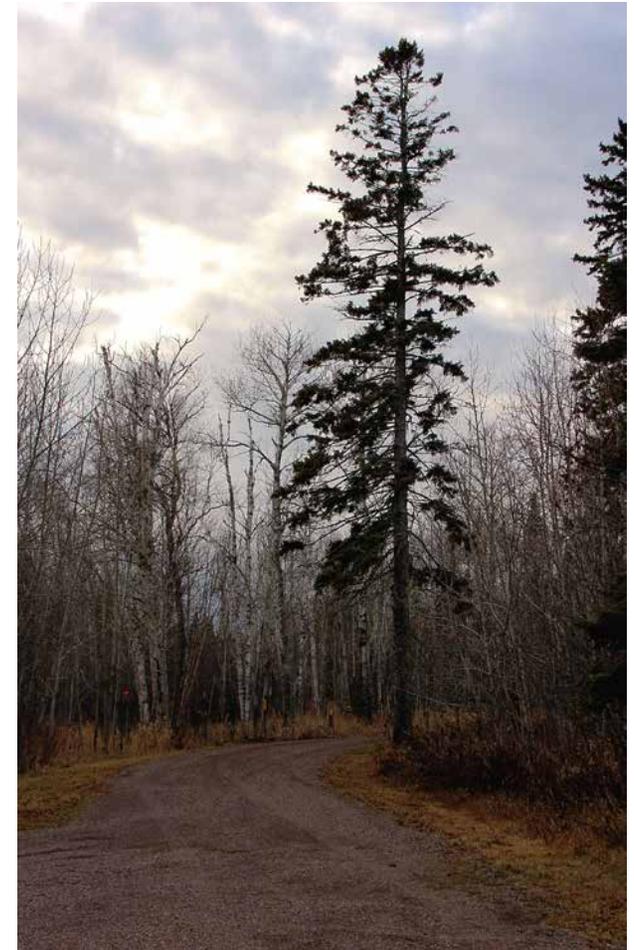


FIGURE 4.4

## site analysis

### Water

The presence of water is important and cannot be ignored when visiting my particular site. Lake Superior is a lake that is large enough where it's difficult to understand the size of and it holds years of history, memories, and folklore. The lake is visible from almost all parts of the immediate site and can be viewed from high and low points up and down the shoreline. The water looks cold and has a blue/grey appearance. You can hear the consistent crashing or even a gentle brush of a wave landing on shore from this massive body of water. It's powerful to look into the horizon line of the lake and you can see the world disappear in the atmosphere; to be able to see such far distances of open space, its a special characteristic I took note of. There are also small creeks, several rivers nearby, and of course Minnesota's lake country nearby. Most of the rivers and water flowing on this site and surrounding terrain will either flow into Lake Superior and flow Eastward towards the Atlantic, South via the Mississippi or North through Canada to the Hudson Bay. Existing in the center of North America with water being a part of our everyday lives here in the environment we live in makes this element something unique to this part of the country and continent. I know the sense of water for me personally has changed greatly after moving away from my hometown of Bemidji, its something I look forward to living on or nearby again.



FIGURE 4.5

# site analysis

## Wind

The wind velocity is noticeable and sometimes unpleasant if it's too strong or too cold. I find wind to be less enjoyable than many other attributes of a site but one that cannot be ignored. The wind flow and direction are affected by Lake Superior and the Mesabi Range in Minnesota to the west of the lake lining parallel to the West of the shoreline. Winds generally travel from West to East, as most weather follows suit. Some wind patterns change depending upon the micro weather taking place at that given time or even changes with the season and temperatures. There are also plenty of natural resources that can be used to protect and cover from unpleasant winds.



FIGURE 4.6

## Human Characteristics

The presence of humans in and around the site is apparent with people living within less than a mile away and a fair-sized city just a few miles south, Two Harbors. There seems to be a good amount of people around whether they are visiting the beautiful area, working in the area seasonally, or have lived there on the lake or the iron range all their lives; people will be vital to consider as they will be living around this proposed recovery center and will be the people these patients will be around.

## site analysis

### Distress

The micro scale of the site seems a bit distressed due to nature. Looks like a lot of timber have been washed up on shore over time makes the rocky and sandy beach look a bit cluttered but it adds to the beauty and nature of the lakeshore of Lake Superior.



FIGURE 4.7

### Soils

The composition of soils on the site include the Alfisol order of soil in Minnesota which is generally deposited in areas with rocky terrain high in iron. The next class of soil is Inceptisols which holds most mixed deciduous and coniferous forest types abundantly. The surrounding area is mainly shallow soil over bedrock with a mixture of rock and gravel and several large mineral deposits in the region make the soil rich and unique.

## site analysis

### Utilities

The site is hooked up to and is nearby all modern available utilities including but not elusive to water/sewer, electricity, telephone/internet. Lake County manages all the utilities available to the site.

### Vehicular Traffic

MN Highway 61 runs North and South on the Western Edge of the site, parallel to the shoreline of Lake Superior. There is a small gravel road that you can access most of the site by as well. Nearby there seemed to be a good amount of traffic but was unnoticed was within the boundaries of the site since it's heavily wooded and the sound of the wind/waves overpowers traffic.

### Pedestrian Traffic

There are no easily walkable sidewalks available along highway 61. There is however a few walking, hiking, and biking trails that run along the coast of Lake Superior up and down from Duluth scattered to Gooseberry Falls State Park.

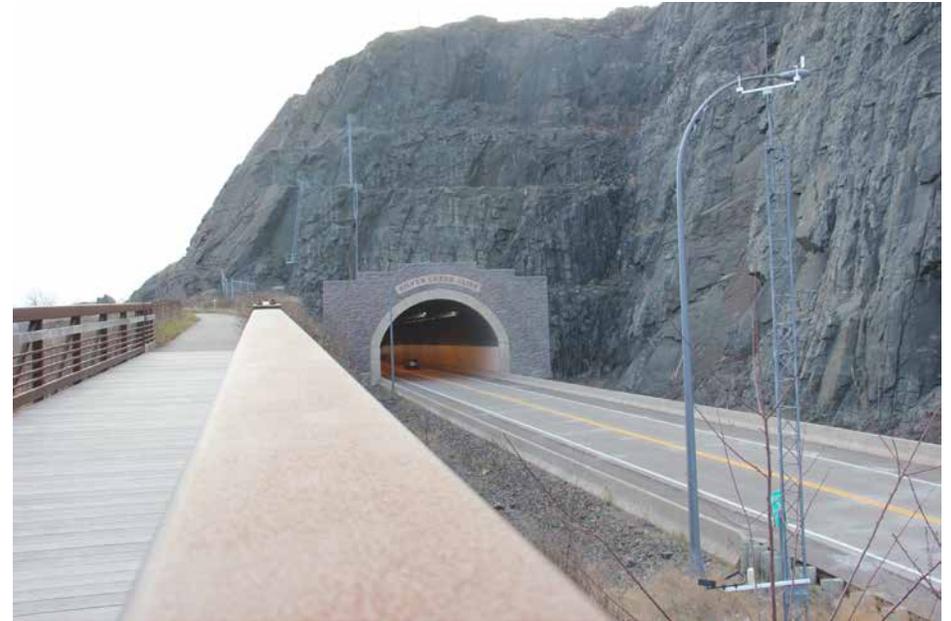
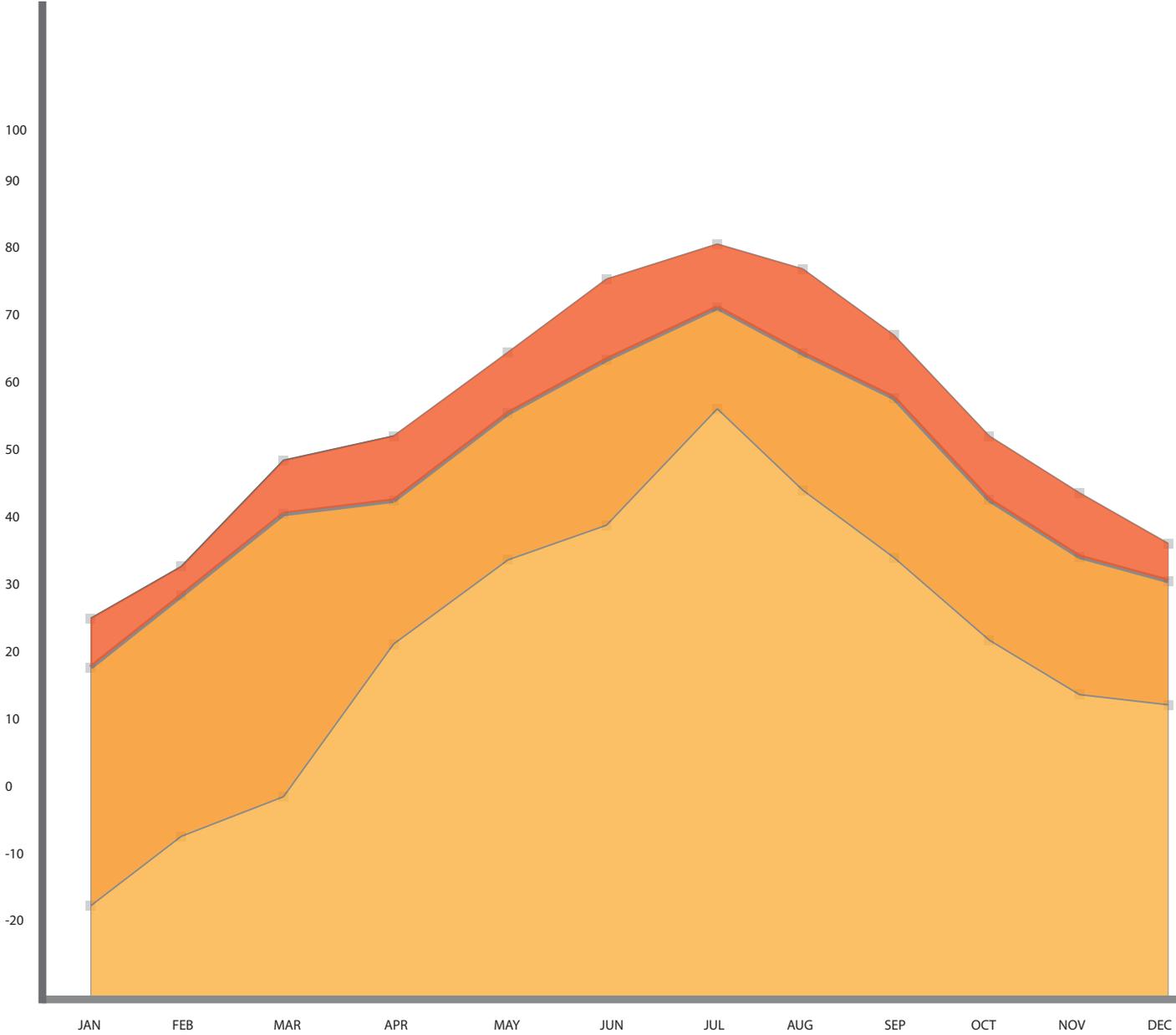


FIGURE 4.8

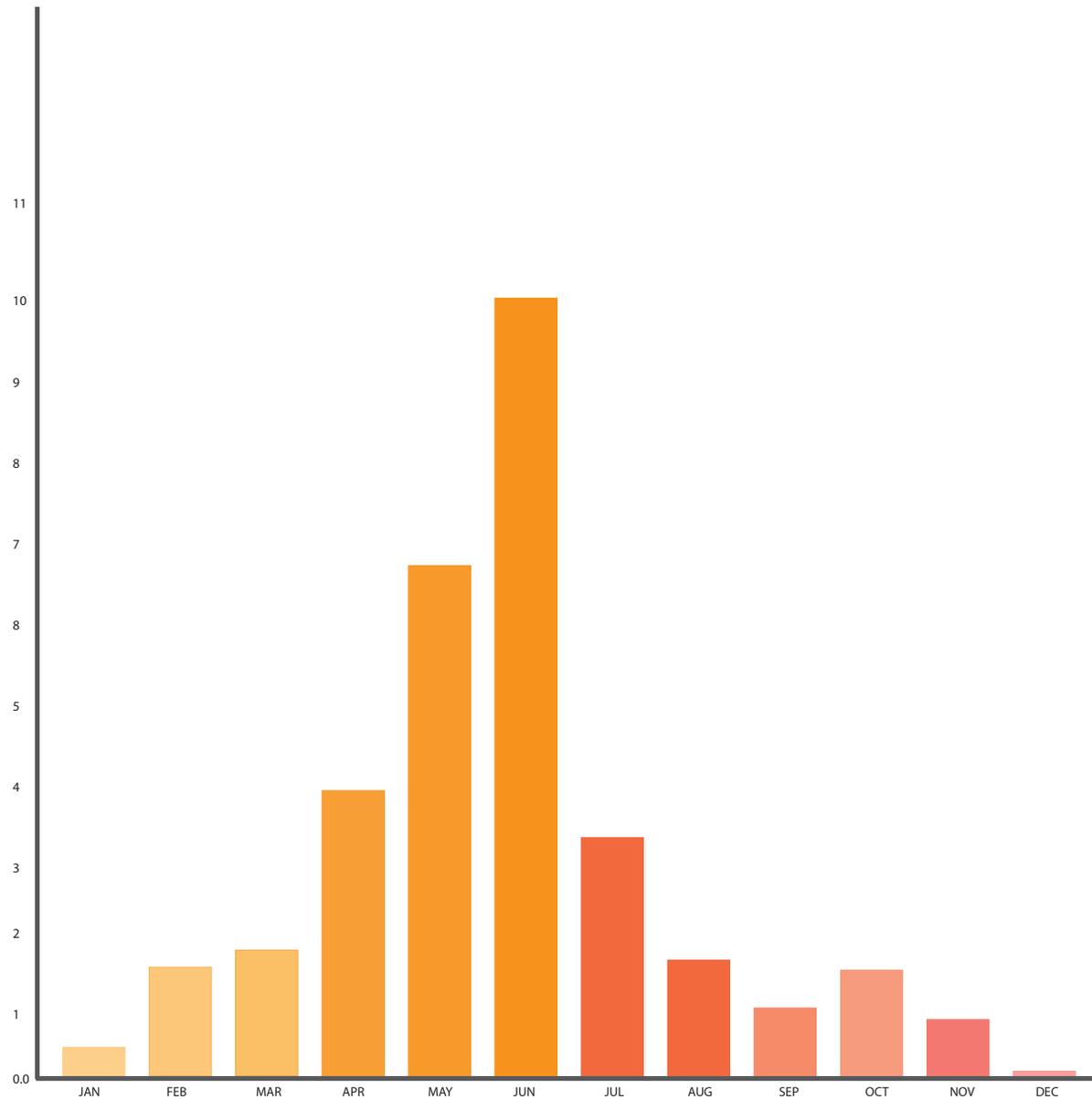


## CLIMATE DATA

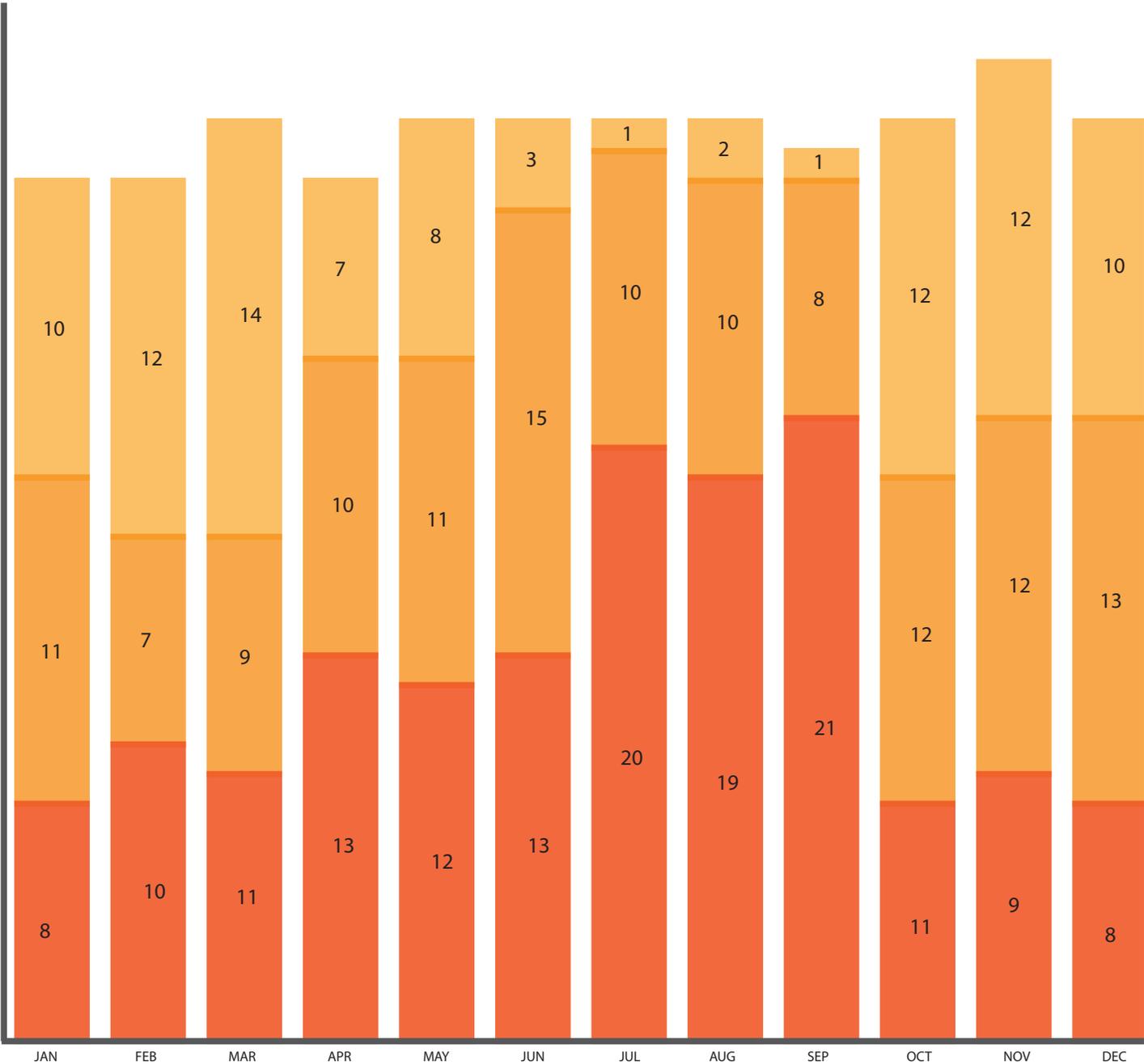
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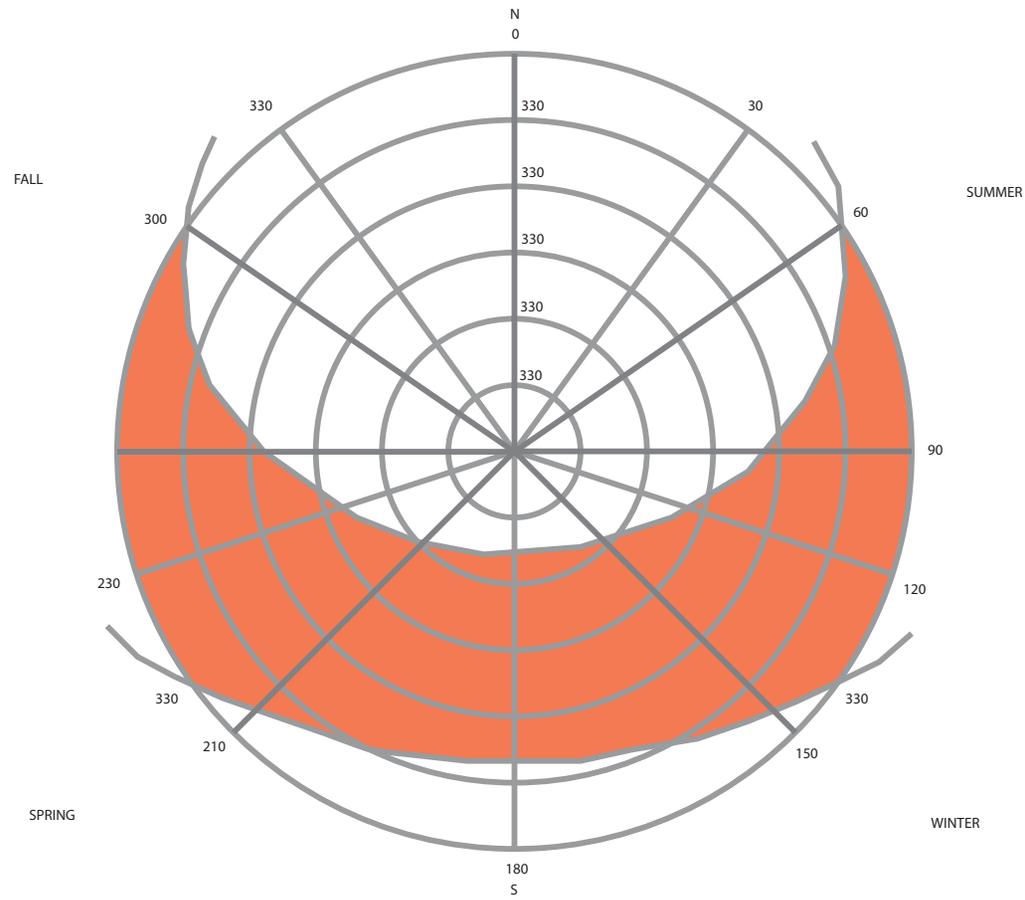
# CLIMATE DATA precipitation



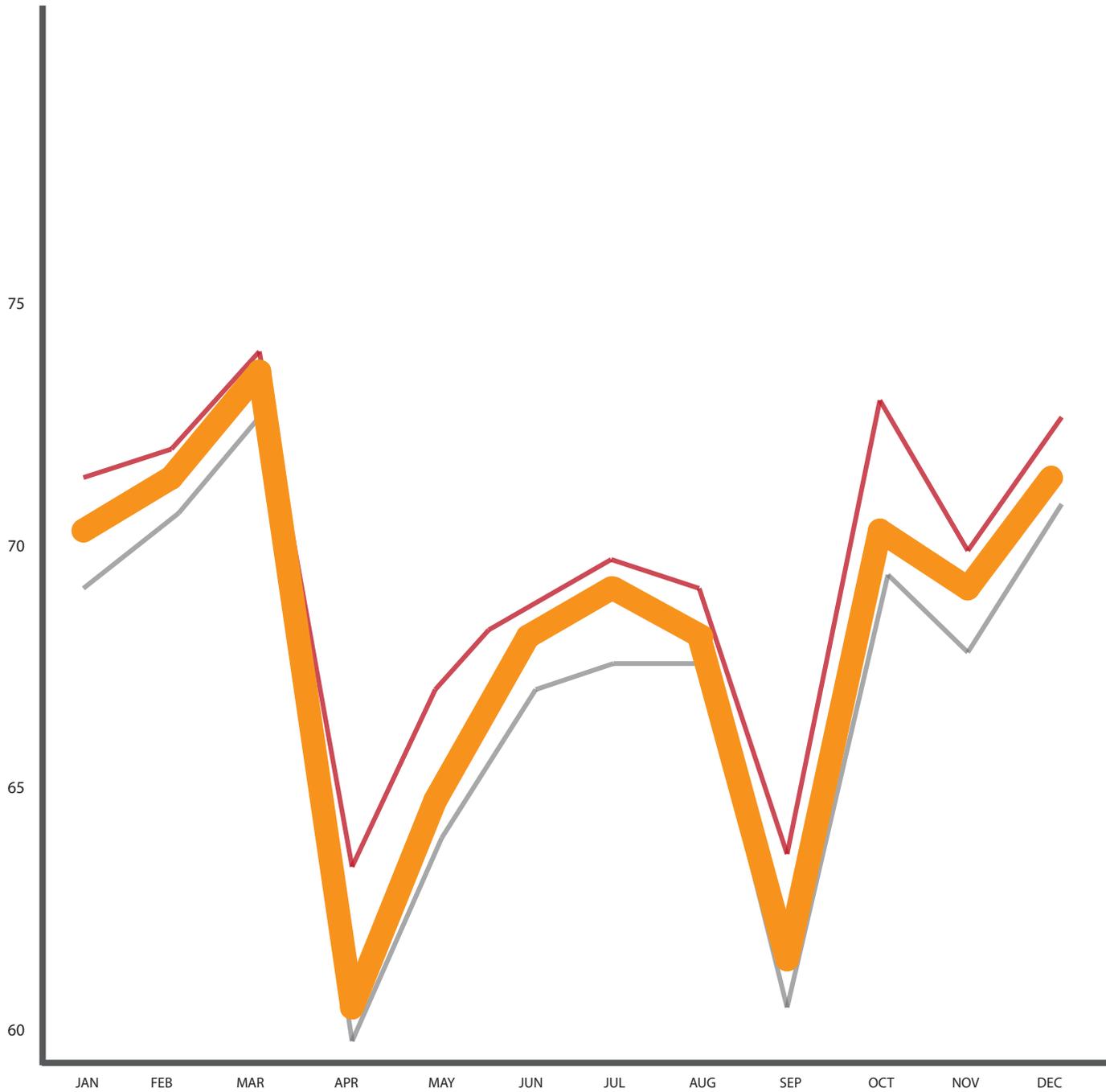
# CLIMATE DATA sky cover



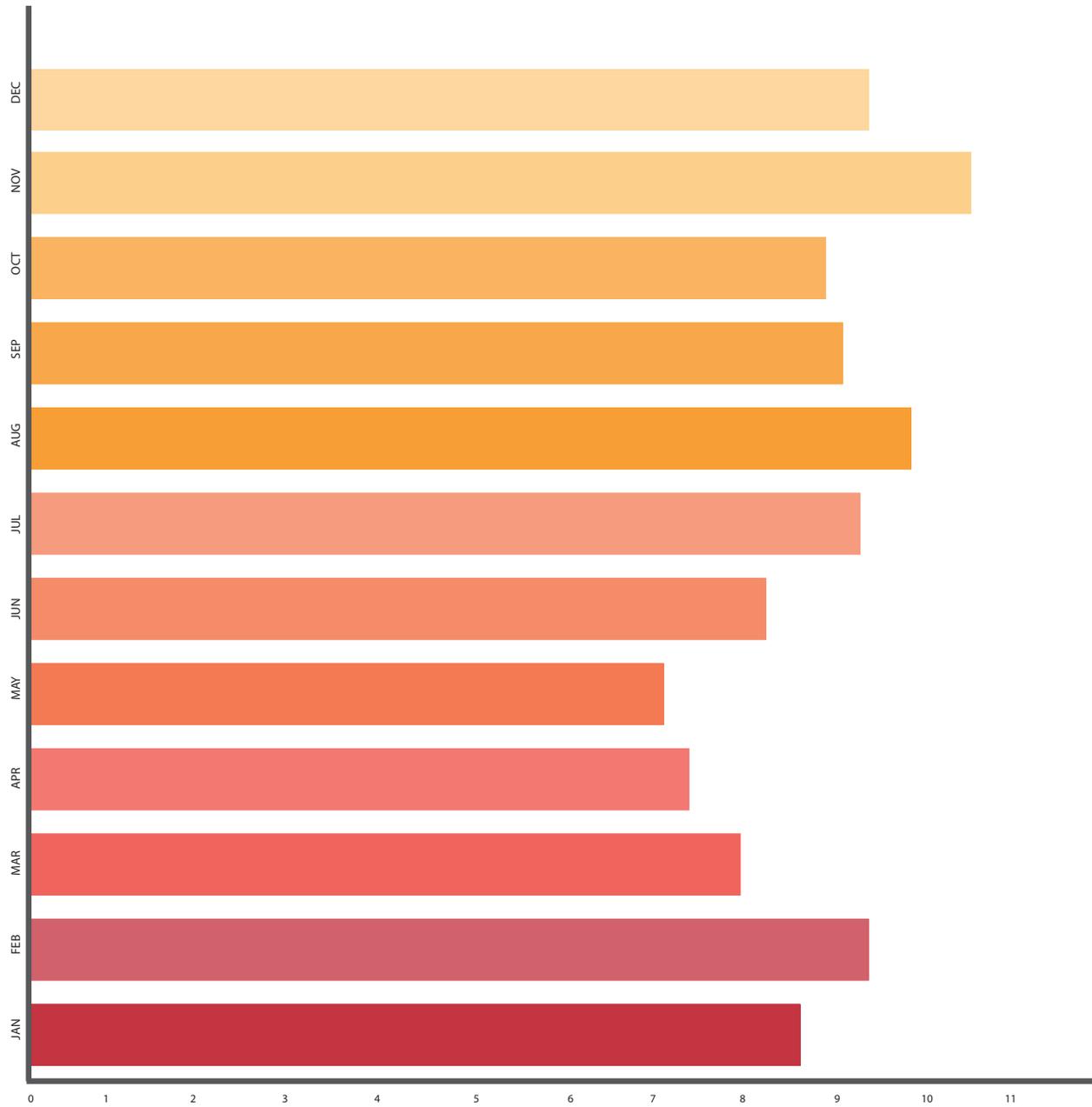
# CLIMATE DATA sun path



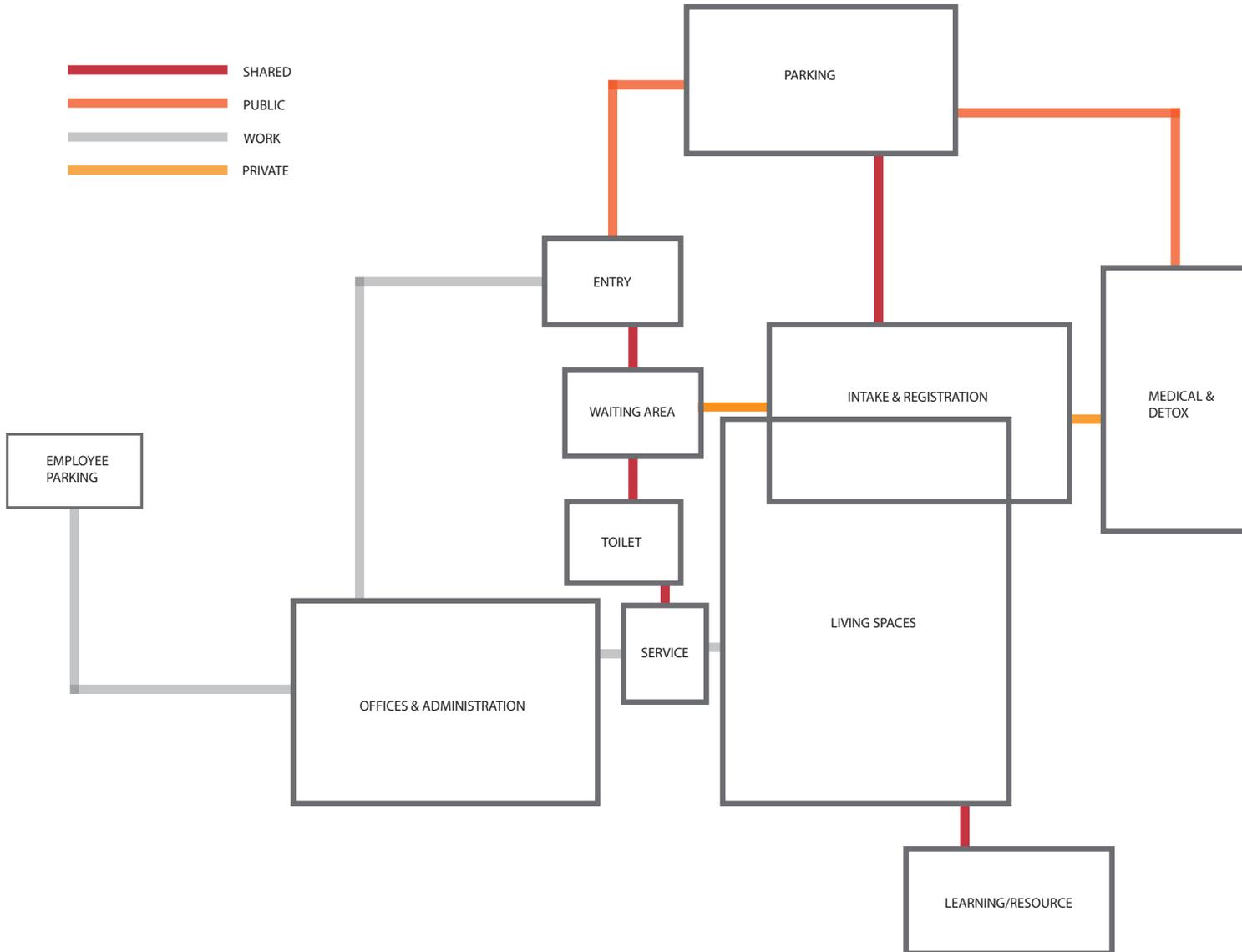
# CLIMATE DATA *relative humidity*



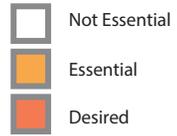
# CLIMATE DATA *wind speed*



# CLIMATE DATA space allocation



# CLIMATE DATA **matrix**



	TOILETS	SERVICES	RESOURCE/LEARNING	LIVING	MEDICAL	CIRCULATION	PARKING	INTAKE	WAITING AREA
ADMINISTRATION OFFICES	Essential	Essential	Desired	Not Essential	Desired	Essential	Essential	Essential	Essential
TOILETS		Essential	Essential	Essential	Essential	Essential	Not Essential	Essential	Essential
SERVICES	Essential		Desired	Desired	Not Essential	Essential	Not Essential	Desired	Essential
RESOURCE/LEARNING	Not Essential	Essential		Essential	Desired	Essential	Not Essential	Desired	Not Essential
LIVING	Not Essential	Essential	Essential		Desired	Essential	Not Essential	Not Essential	Essential
MEDICAL	Not Essential	Essential	Not Essential	Not Essential		Not Essential	Not Essential	Not Essential	Not Essential
CIRCULATION	Not Essential	Essential	Essential	Essential	Essential		Essential	Desired	Desired
PARKING	Not Essential	Not Essential	Not Essential	Essential	Not Essential	Not Essential		Essential	Not Essential
INTAKE	Not Essential	Essential	Desired	Desired	Desired	Desired	Desired		Desired
WAITING AREA	Not Essential	Essential	Desired	Desired	Not Essential	Desired	Desired	Essential	

# space allocation

Recovery Center: >	
Entrance/Lobby:	400 sf
Reception:	300 sf
Front Office:	350 sf
Small Meeting Rm:	300 sf x4= 1200 sf
Large Meeting R:	500 sf x2= 1000 sf
Public Toilet:	200 sf
Private Toilet:	200 sf
Mechanical:	150 sf
Storage:	200 sf x2 = 400 sf
Circulation:	500 sf
Living/Dining	1000 sf
Kitchen:	300 sf
Employee Rm:	300 sf
Meditation Rms:	400 sf
Inpatient Residential Units	650 sf x4 = 2600 sf
Group Sober Living Units	900 sf x4= 3600 sf
Clinic & Offices:	1600 sf
Indoor/Outdoor Garden spaces	750 sf
Public Education Rm:	1200 sf

TOTAL BUILDING SF: ~~ 15,680 sf

# PROGRAM APPENDIX

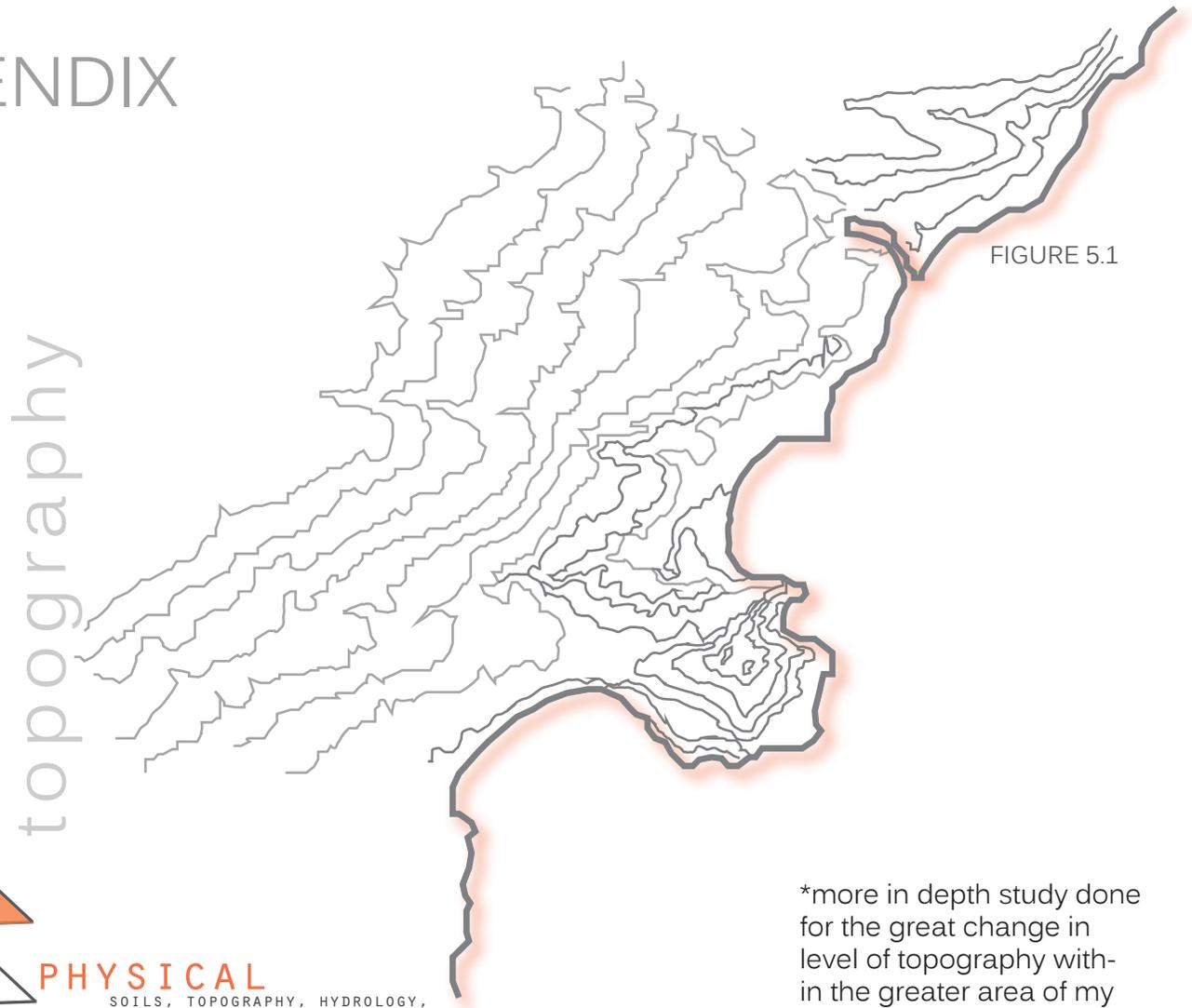
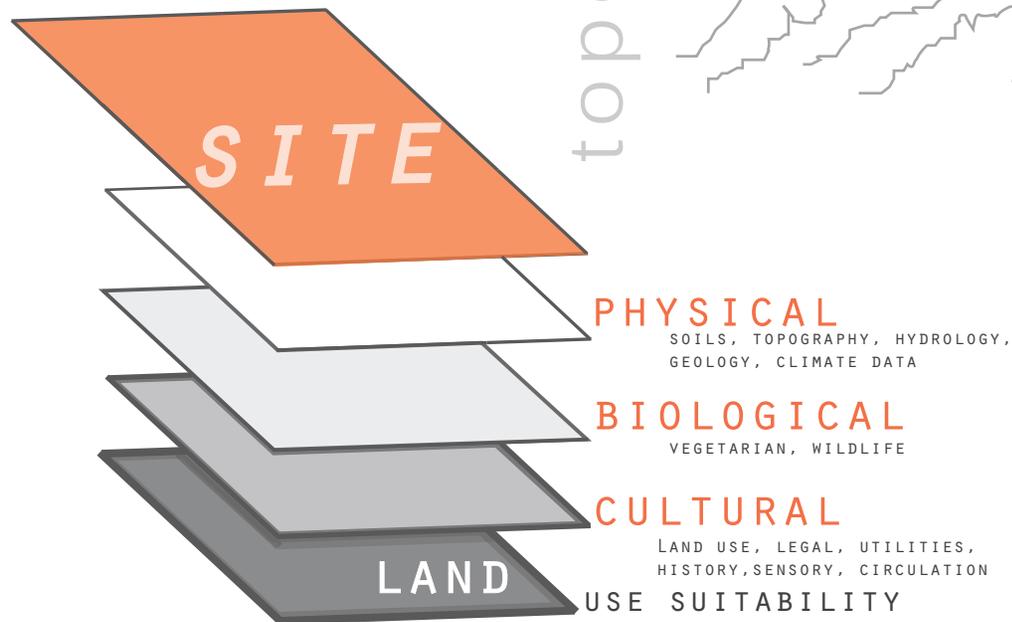
## space allocation adjustments

Entrance/Lobby:	800 sf
Reception:	500 sf
Front Office:	350 sf
Small Meeting Rm:	400 sf x4= 1200 sf
Large Meeting R:	600 sf x2= 1000 sf
Public Toilet:	350 sf
Private Toilet:	200 sf
Mechanical:	400 sf x 2= 800 sf
Storage:	400 sf x2 = 400 sf
Circulation:	500 sf
Living/Dining	2000 sf
Kitchen:	450 sf
Employee Rm:	750 sf
Meditation Rms:	350 sf
Inpatient Residential Units	850 sf x6 = 2600 sf
Group Sober Living Units	1100 sf x6= 3600 sf
Clinic & Offices:	1800 sf
Indoor/Outdoor Garden spaces	900 sf
Public Education Rm:	1400 sf

TOTAL BUILDING SF: ~~ 22,000 sf

# PROGRAM APPENDIX

conceptual way of approaching site design decisions



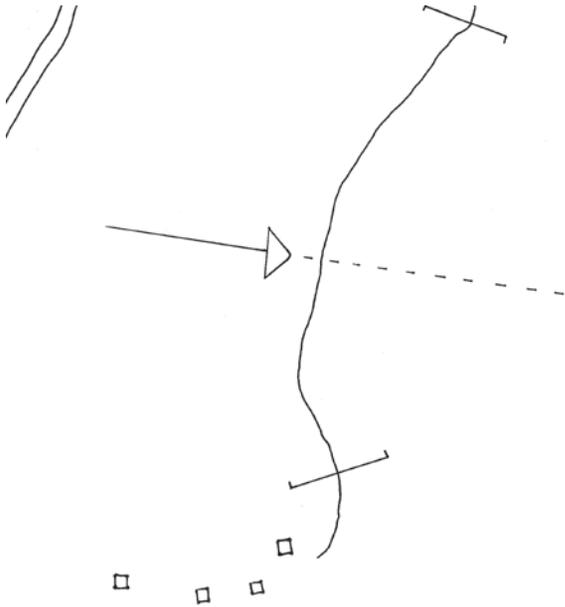
\*more in depth study done for the great change in level of topography within the greater area of my thesis site; further investigation gave way to reveal the micro scale of the site remaining open to the shoreline and relatively late and low to the water.

# DESIGN DOCUMENT



# process

FIGURE 5.3

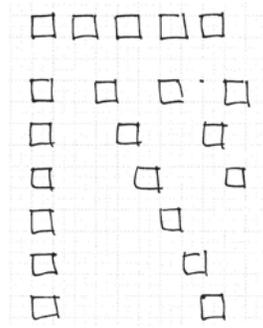


## ACCESS

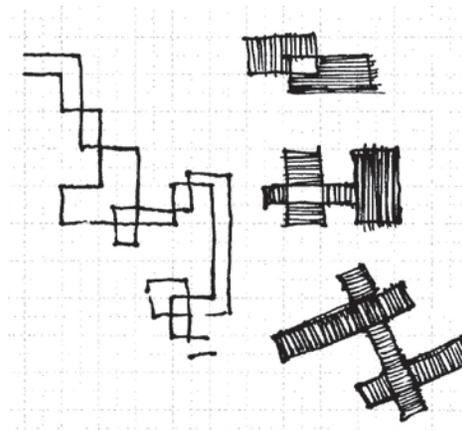
- > public vs. private
- > views
- > to/from neighbors
- > nature & water
- > sunshine



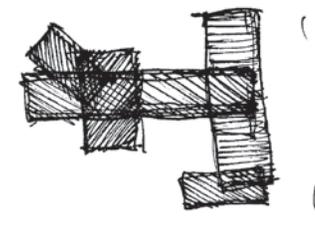
linear



sequences



relationships...



...connections

FIGURE 5.4

# process

## project elements

### SPATIAL DESIGN

Intake/ Registration

Administration

Medical Care/Detox

Living

Learning

Service

Wellness

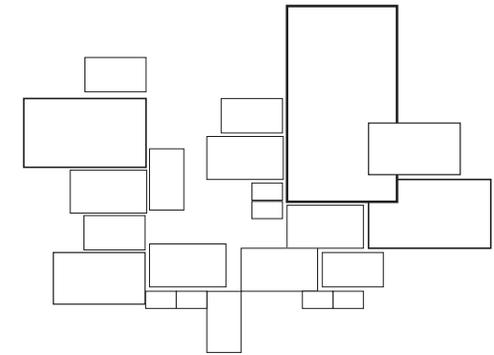
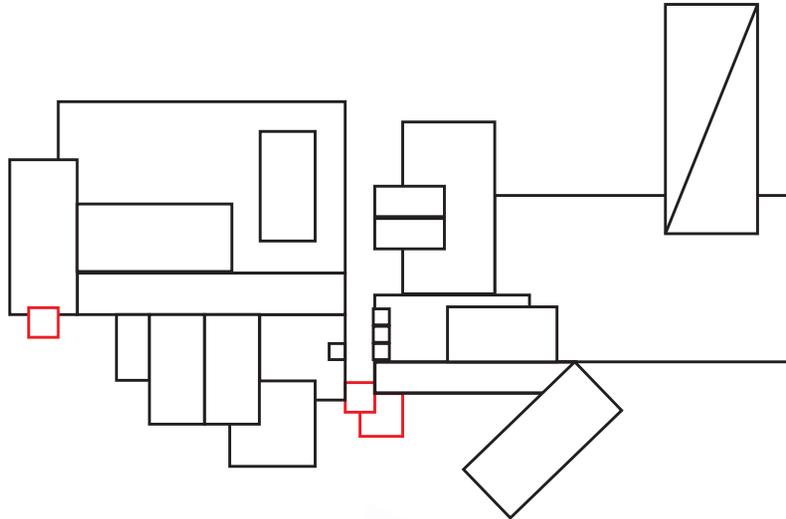
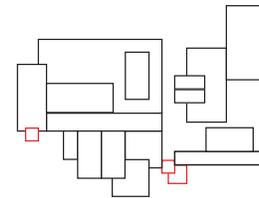
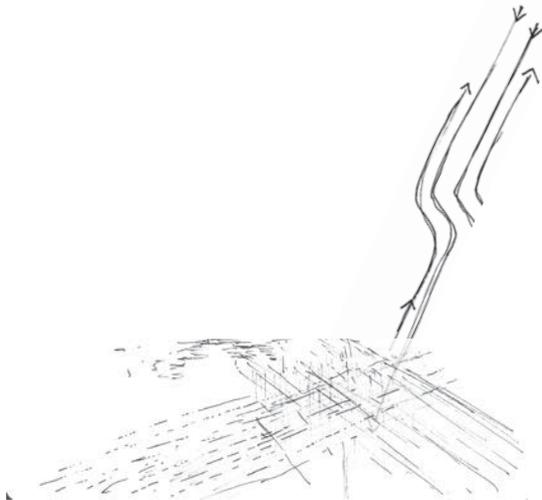


FIGURE 5.5



# process

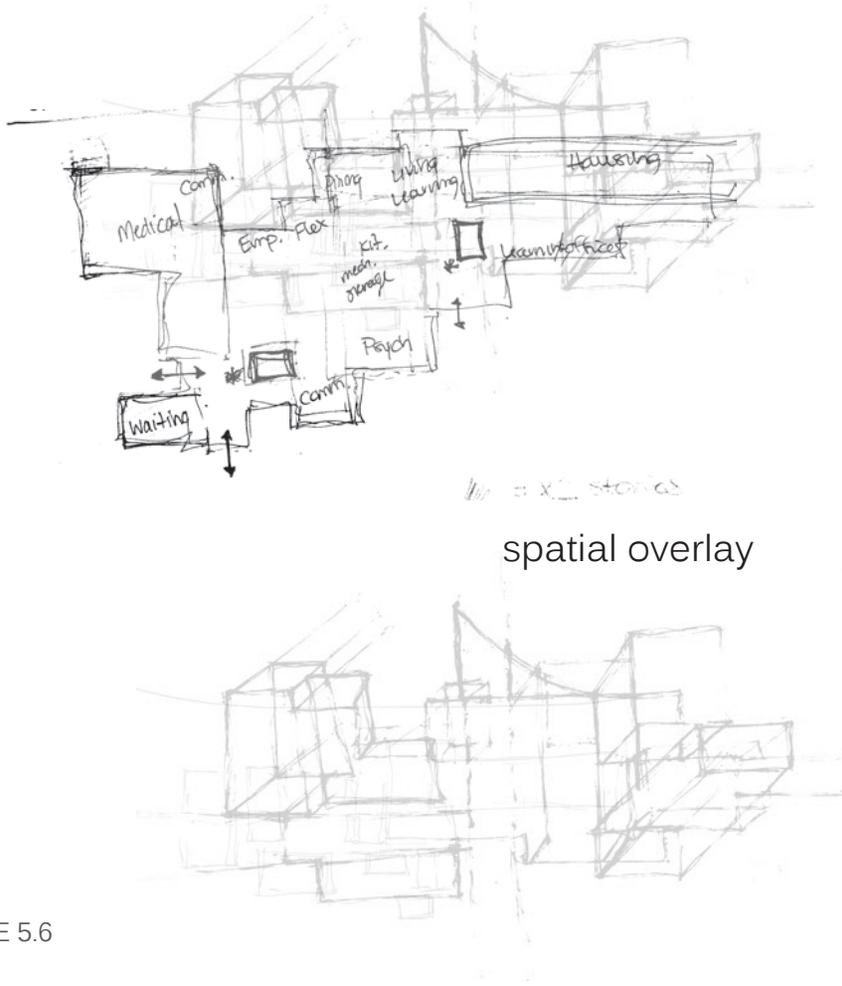


FIGURE 5.6

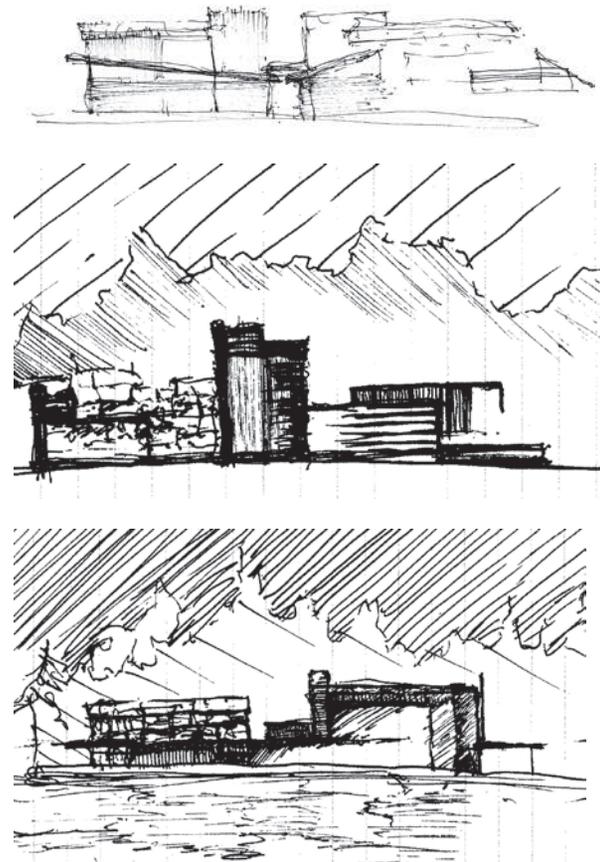


FIGURE 5.7

viewpoint  
elevation  
materiality  
harmony within site & landscape

# initial design decisions

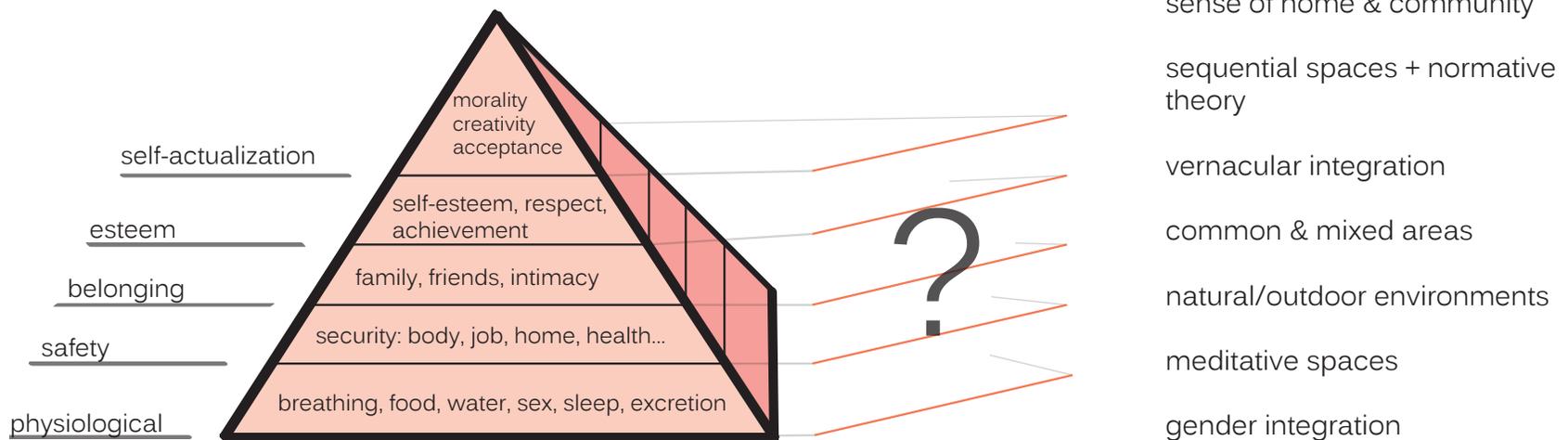
- small and intimate spaces that are easily understood
- opportunities for smaller gatherings of people and space
- incorporate tactile sensory elements in design
- create stabilization and harmony
- maintain private spaces for residents that aren't isolating
- biological relationships
- safety and security (other needs)
- patients reflection and personalization
- different people require different therapy
- addiction and treatment = spectrum of matters
- universal design method
- positivity and nurturing

# RESEARCH & SUPPORT

part of my thesis project research included case study typology visits that displayed different types of care and recovery and different setting, site, and context.

Prairie St. John's - Fargo, ND  
Hazelden Recovery Center - Plymouth, MN

MASLOW's Hierarchy of Needs



## RESEARCH & SUPPORT

“schools of thought & research” (psychology)

### TYPES OF ADDICTION

BEHAVIORAL

personality theory

Cloninger’s Tri-Dimensional Theory

withdrawal & drives

CHEMICAL/SUBSTANCE

positive vs. negative affect

model of impulsivity

- mental disorders
- spectrum disorders
- biological mechanisms

CASE STUDY + process



FIGURE 5.9

DAVID SALMELA

koehler retreat - silver bay, MN

framing views  
materials  
vernacular & site integration

fischer. thomas, salmela. david  
SALMELA ARCHITECT 2005

CASE STUDY + process

DAVID SALMELA  
albrecht residence - red wing, MN



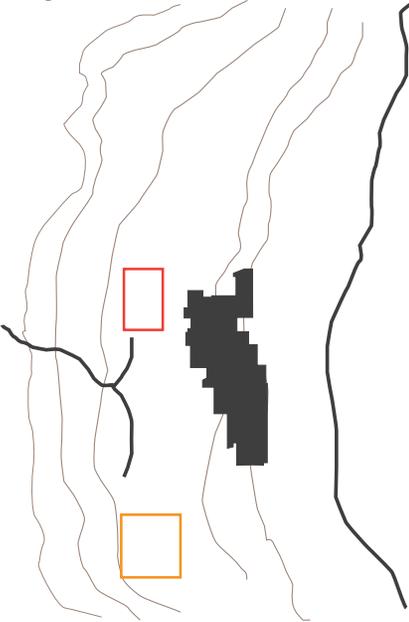
fischer. thomas, salmela. david  
SALMELA ARCHITECT 2005

FIGURE 6.1



community outdoor areas

site configuration



lakefront residential facade

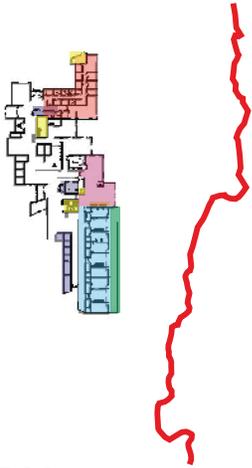


FIGURE 6.3

### housing concept details

capacity: < 26 patients/  
residents

- shared loft living spaces:  
2 levels:
- 1 bedroom = 2 ppl, 1ba.
  - shared lower level living space w/kitchen
  - shared 2nd level living/ flex space



first floor



second floor

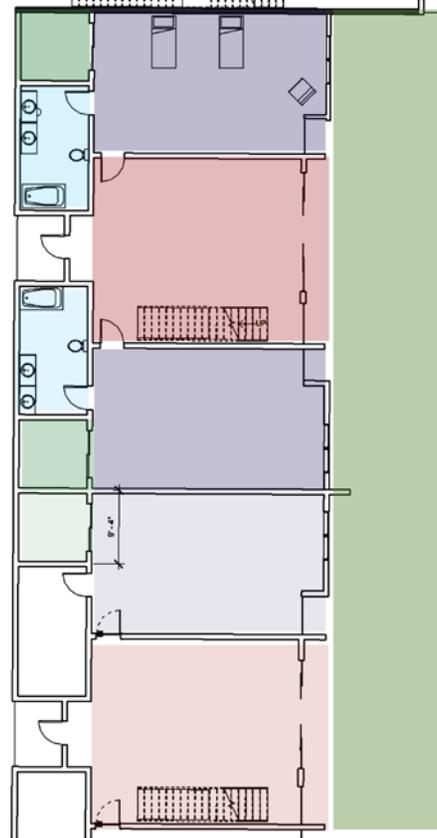


FIGURE 6.4

changes in spatial organization

- bring materials to surface
- focus on environment and senses
- linear forms vs. organic
- building details & sustainability



MIDTERM

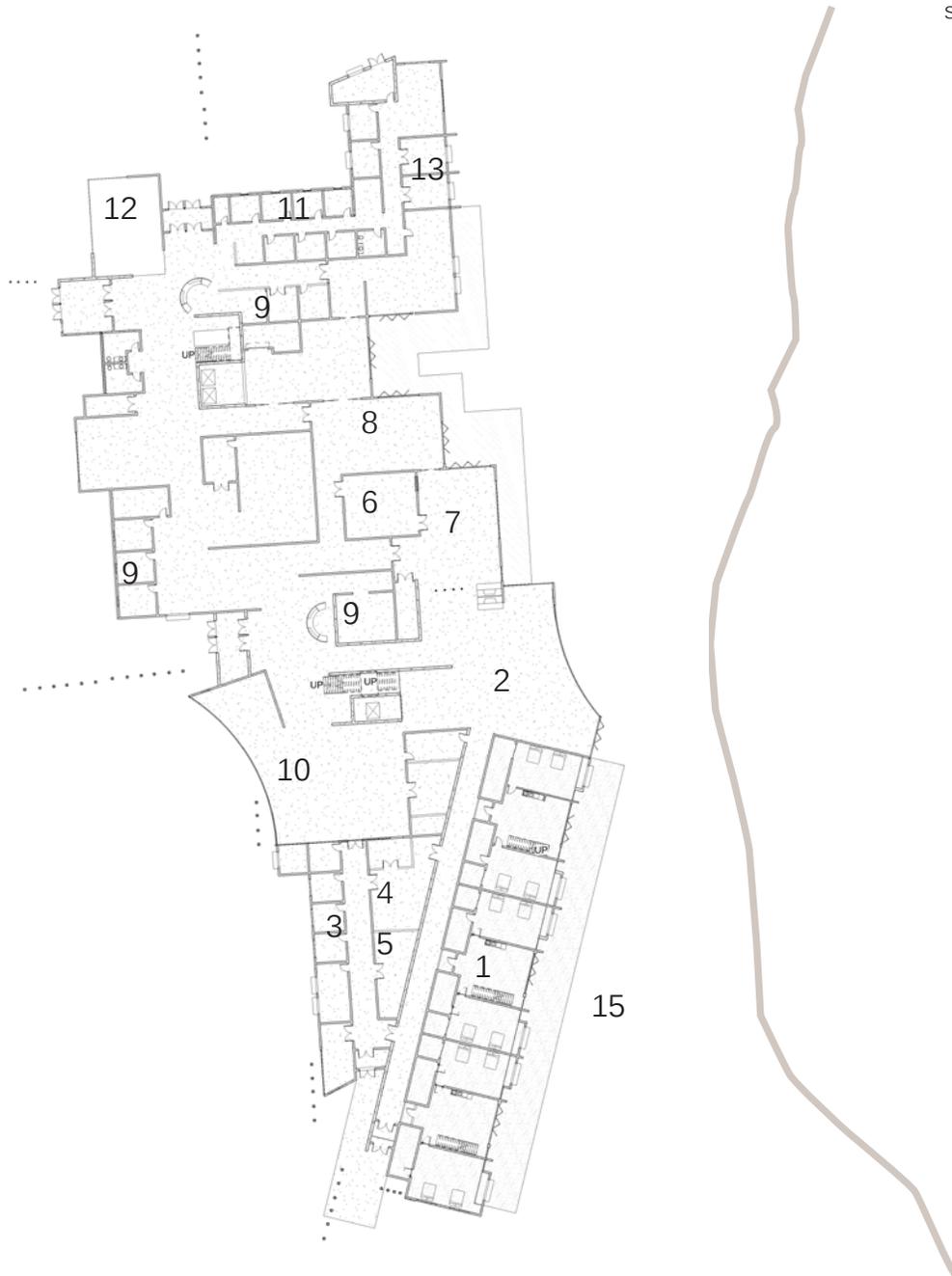
# FINAL DESIGN





project solution

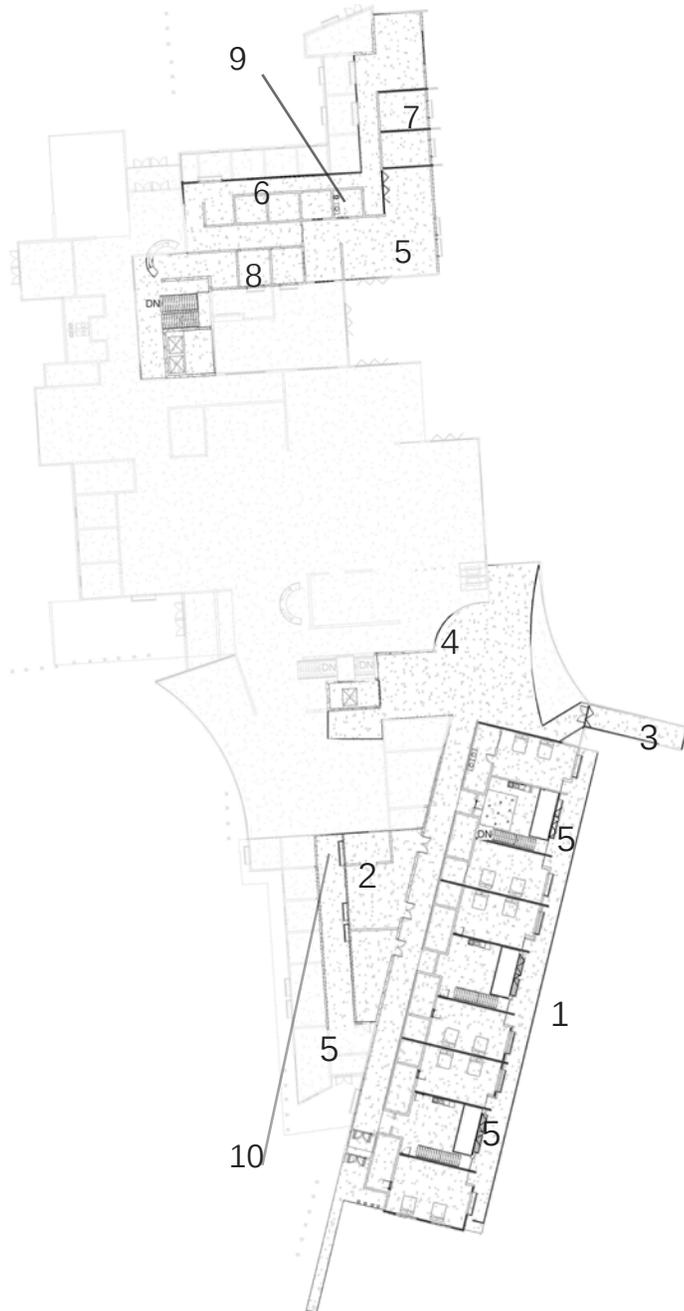
floor plans + FIRST FLOOR  
scale: 1:30



organization

- 1. housing
- 2. community living room
- 3. private therapy rooms
- 4. reflection
- 5. courtyard
- 6. main kitchen
- 7. dining
- 8. community learning spaces
- 9. offices
- 10. group therapy room
- 11. exam rooms
- 12. reception
- 13. detox
- 14. flex/living/learning
- 15. outdoor garden access

floor plans + SECOND FLOOR  
scale: 1:30

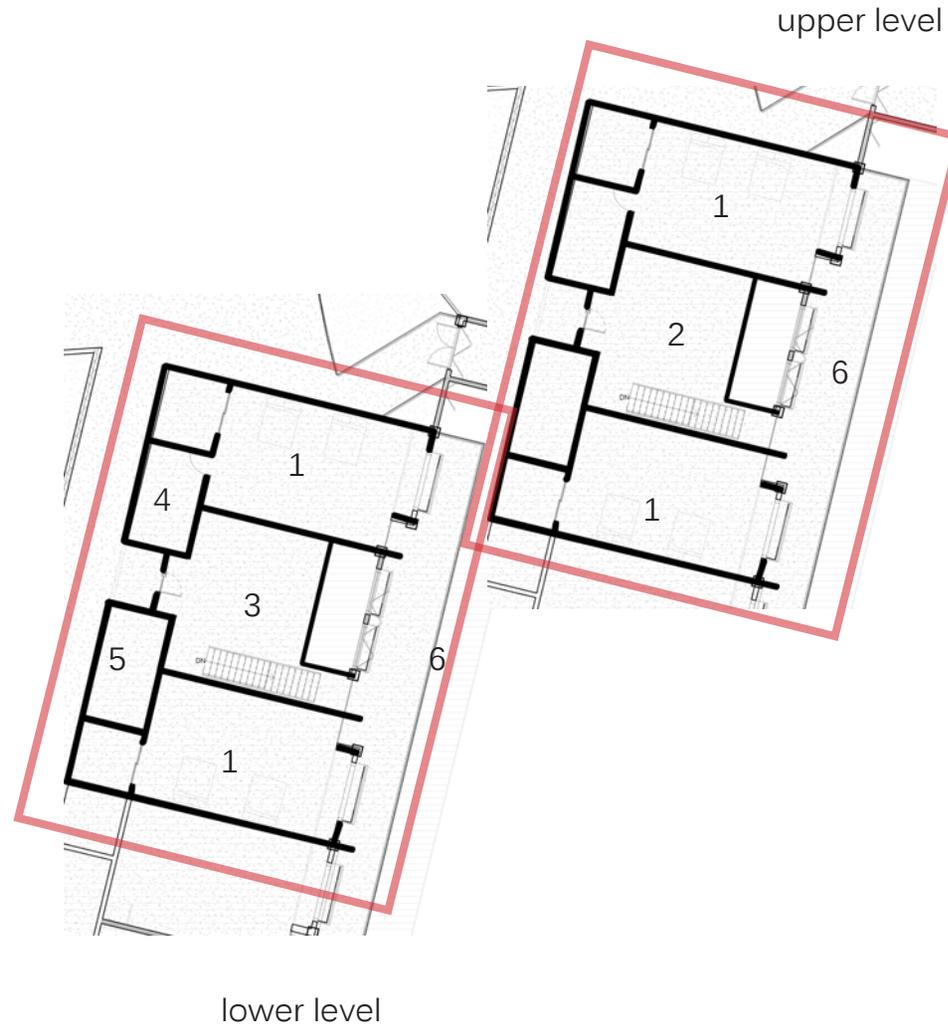


organization

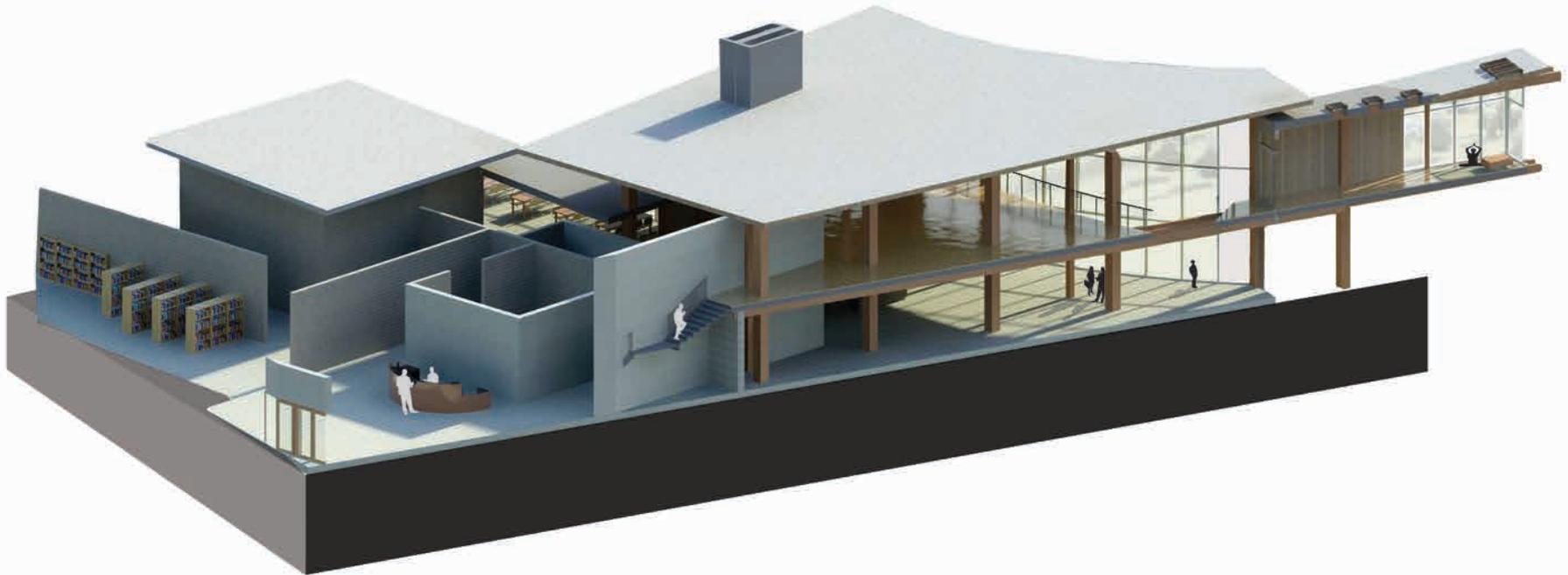
1. housing
2. fitness
3. meditation
4. shared community space
5. outdoor roof access
6. exam/clinic
7. detox/recovery
8. offices
9. restrooms
10. mechanical

shared loft living spaces

- 1. bedroom
- 2. living
- 3. kitchen/dining
- 4. bathroom
- 5. closet
- 6. outdoor access



section-perspective



section-perspective





# healing ENVIRONMENT

group & community therapy space

# spaces

## PRIVACY

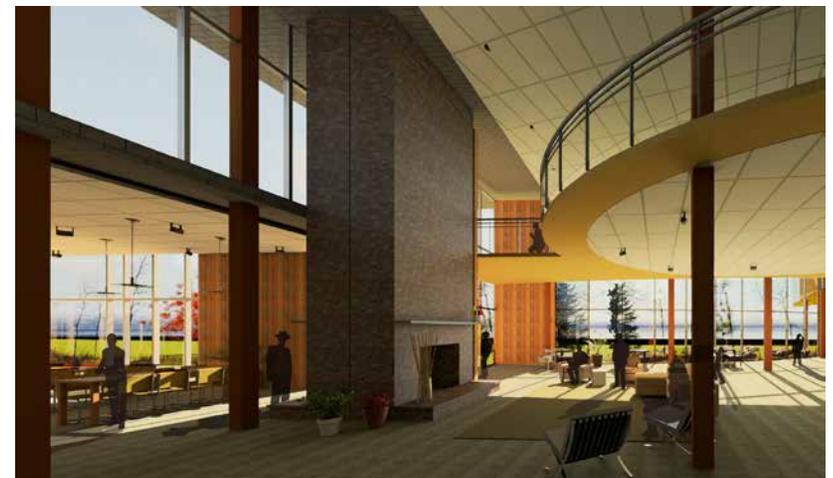
strengthens trust and sense of security;  
calm, ease and ability to self-reflect.



consultation/therapy spaces

## COMMUNITY

opportunities for friendship and shared ex-  
perience in a healthy, positive, and nurtur-  
ing environment

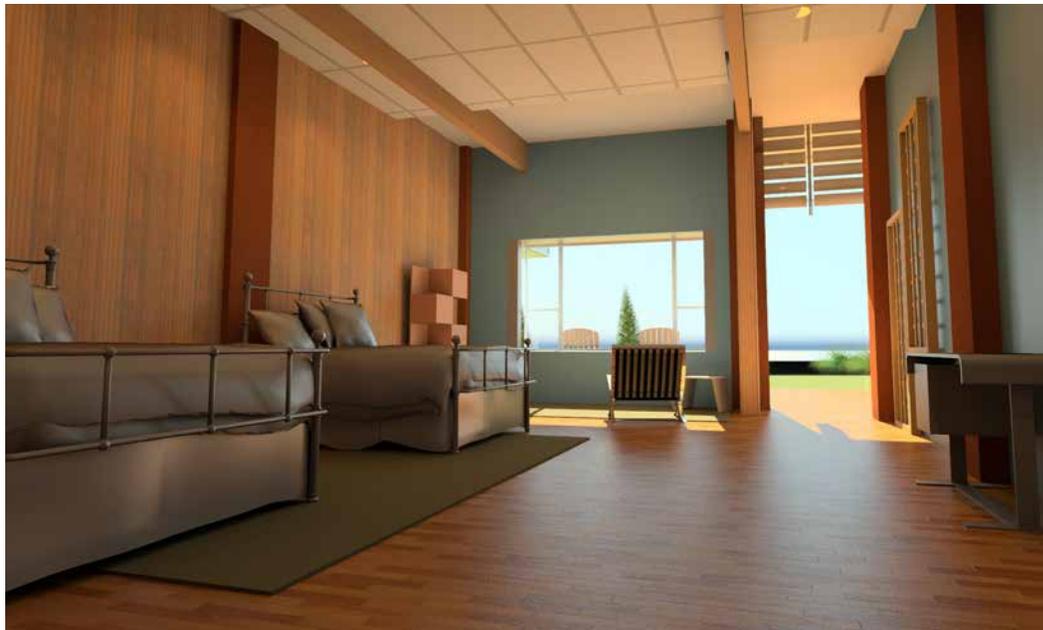


the "Lake Room" (community/living room)

# ENVIRONMENT

REFLECTION  
meditation cantilever space

self-awareness and spirituality



COMFORT & TRANQUILITY

shared bedroom space -  
lake-facing

eases tension, anxiety, stress  
healthier environments for  
groups and individuals



shared living & kitchen space

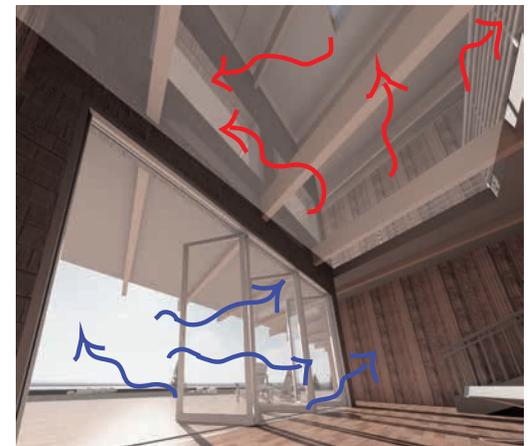
## SENSE OF HOME

safety & security

belonging

physiological

## ENVIRONMENT



airflow in loft units

# sunshine & daylighting

SUMMER SOLSTICE (<sunrise - <sunset)



access to the sun is vital for healing in several aspects. (heliotherapy) Helios is the ancient Greek therapy of using the sun for its many benefits

HEALING & Cleansing

mind  
body  
soul

Felicetti/Marcus  
Univ. of Sydney, Australia  
Yoga

FIGURE 7.1

sunshade

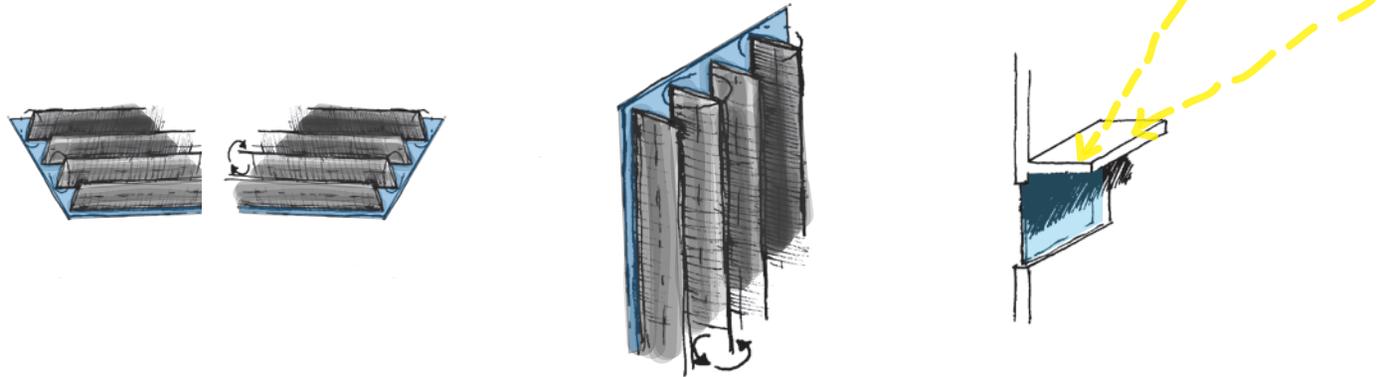


FIGURE 7.2

horizontal/vertical louvers system

awnings & overhang/ bay windows

structure  
light & heavy timber  
framing

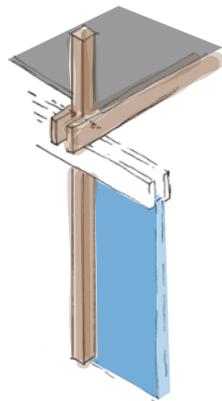


FIGURE 7.3

details moving forward:  
water collection & engagement  
courtyard spaces (dead spaces within spaces)  
sun collection  
wind power

# design decisions revisited

- small and intimate spaces that are easily understood
- opportunities for smaller gatherings of people and space
- incorporate tactile sensory elements in design
- create stabilization and harmony
- maintain private spaces for residents that aren't isolating
- biological relationships
- safety and security (other needs)
- patients reflection and personalization

# looking into the horizon

A crucial design theme & concept was used to bring forth decisions to result with a healthy and suitable environment for recover. The wide expanse of space you have to look into over Lake Superior is one that somebody has to experience to truly understand. It's a powerful element that is naturally part of my site and was a driving force behind my thesis.



# JUSTIFICATION

## PROBLEM STATEMENT

How can the design of a rehabilitation center assist in the care that each patient experiences and requires individually?

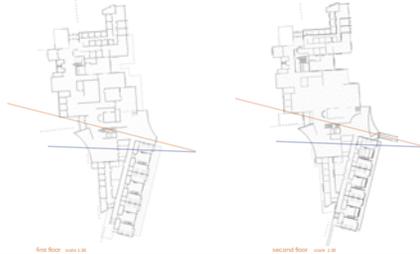
creating environments and spaces (with certain researched characteristics) where progress and an individual and meaningful experience can take place during the long and complex process of recovery for one suffering from the disease of addiction.



# spatial organization



- 1 Reception/Waiting
- 2 Exam Room
- 3 Office
- 4 Community Space/Classroom
- 5 Library
- 6 Conference/Meeting Room
- 7 Group Therapy Space
- 8 Private Therapy Rooms
- 9 Family Center
- 10 Recreation/fitness Spaces
- 11 Shared Living Unit Area
- 12 Storage Room
- 13 Mechanical
- 14 Men Living Unit/ Room
- 15 Outdoor Rooftop Deck
- 16 Meditation Space



# sense of home



main living 'loue' room



contemplative meditation space



private therapy/consultation room



community & group therapy



shared living

## spatial strategy for recovery

**social & personal**  
patients who suffer from addiction or mental illness require easily understood and navigable spaces.

**community engagement**  
reinforcing the positive and character of places is essential to bring a look to the design and is connecting that in universally positive in healing, therapy, wellness and mood.

**privacy**  
allowing patients to have adequate amounts of privacy in order to feel comfortable and not threatened by others or their environment or factors that aren't present in or around the given site.

**structural connections**  
the surrounding outdoors is an aspect of the site I wished to bring into the building through visible use and attention to how people may act or feel with a particular view or space in time of day.

**connection & harmony**  
given the therapy patients will benefit from self-reflection and balance in their body, mind, and in the world around them, this rehabilitation center gives a patient an opportunity to reconnect with themselves and begin to live again with a new sense of the space we inhabit everyday.

## airflow diagram - residential spaces



**DESIGN DECISIONS: recovery & therapy approach**

**INTIMATE**  
small, subtle additions to all spaces to create an open and flexible feeling, yet create a structure both architecturally and aesthetically.

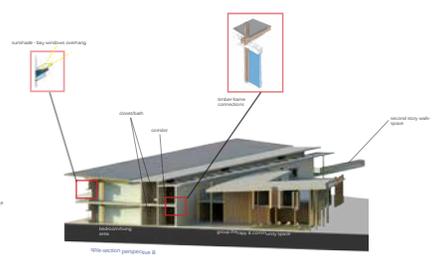
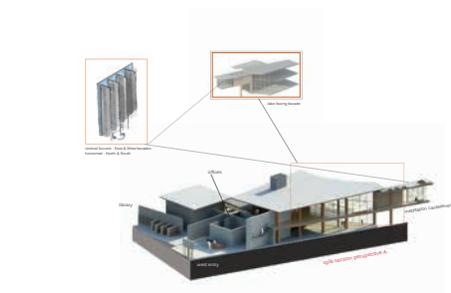
**SENSORY**  
through the use of materials and the creation of space through positive, negative, void, or mass, a person often uses their senses and become more aware of themselves and ways of thinking/presenting in a healthy environment.

**PRIVATE & REVEALING**  
the successful design of a secure and safe environment for patients and residents to be able to focus on their own health, healing, and wellness.

**VERNACULAR**  
being present in a strong nature driven space, both in and outdoors, is important to remind a guest or patient of their surroundings and to take advantage of their wisdom or design for the creation of space and their personal healing experiences.

**STABILIZATION & HARMONY**  
becoming comfortable within yourself is a goal for all of us and these spaces work to harmony with the world and their surroundings, create spaces in relaxation and light through their architectural form.

DESIGN JUSTIFICATION



Department of Architecture and Landscape Architecture, NCSU  
 ARCH 772 Design Thesis Spring 2023  
 Recovering Architecture: Rehabilitation Center, 62,482 sq ft  
 Charlotte, NC  
 Architects: NBBJ  
 Architects: NBBJ, AECOM, ABBB Photography, Illustration: iDesign



110  
FIGURE 7.6

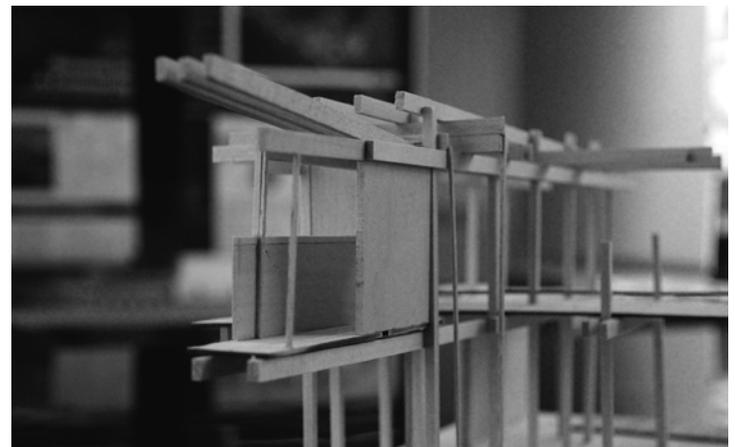
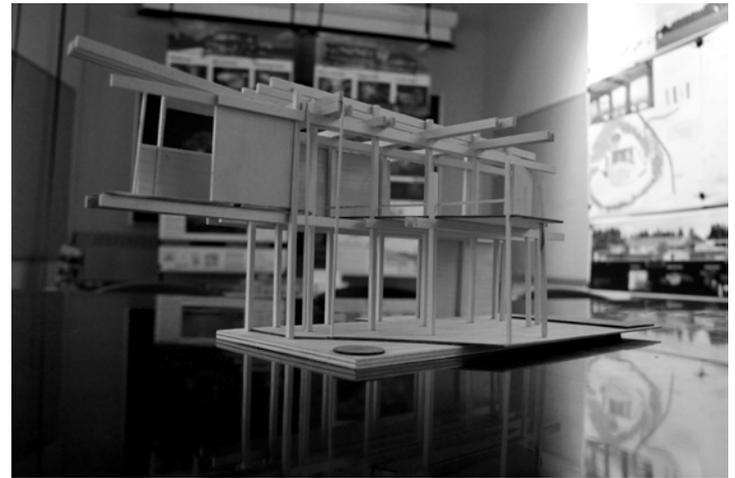
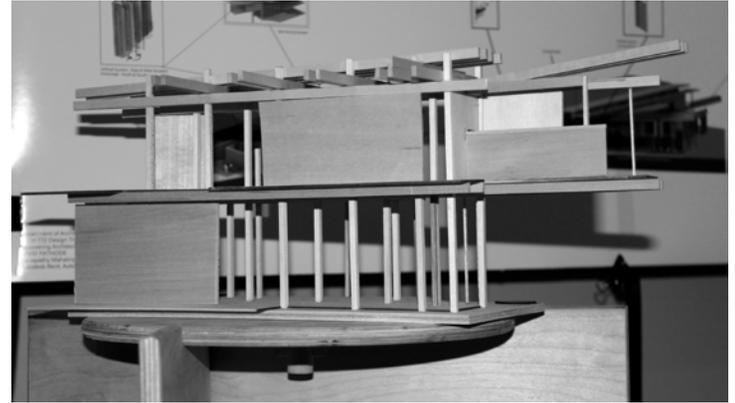


FIGURE 7.7

installation

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North Dakota State University is a  
home away from home.

