BREAKING THE MOLD

Exploring the recreation of fitness design in a natural setting.

DYLAN SULLIVAN // DESIGN THESIS // SPRING 2017

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SIGNATURE PAGE

Breaking the Mold
A Design Thesis Submitted to the Department
of Architecture and Landscape Architecture of
North Dakota State University. By Dylan Sullivan,
In partial fulfillment of the requirements for the
degree of Masters of Architecture.

Primary Thesis Advisor

Thesis Committee Chair

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ADVOCATING SOCIAL & COMMUNAL FITNESS

THESIS ABSTRACT

Since the beginning of time, mankind has maintained a profound connection with their physical fitness and the World around them. However, modern day practices are distrupting these formerly innate behaviors.

The lethargic lifestyles of the 21st century are a direct reflection of the obsession over constant commodity and innovation. Perhaps it is time to address this issue, with the health and wellness of the planet and its inhabitants depending upon it.

The purpose of this project is to design a public fitness center because, as people age, they are getting less: physical activity, social interaction and exposure to the exterior environment.

Current exercise facilities perpetuate this phenomenon, by intimidating and overwhelming its users, imposing a false sense of judgement within the isolated space.

Thus, the aim of this design, is to break the mold of a typical fitness center, inspiring users to physically and socially interact with eachother and the environment, by providing dynamic opportunities to move throughout the site and building as one.

THESIS NARRATIVE

INTRO

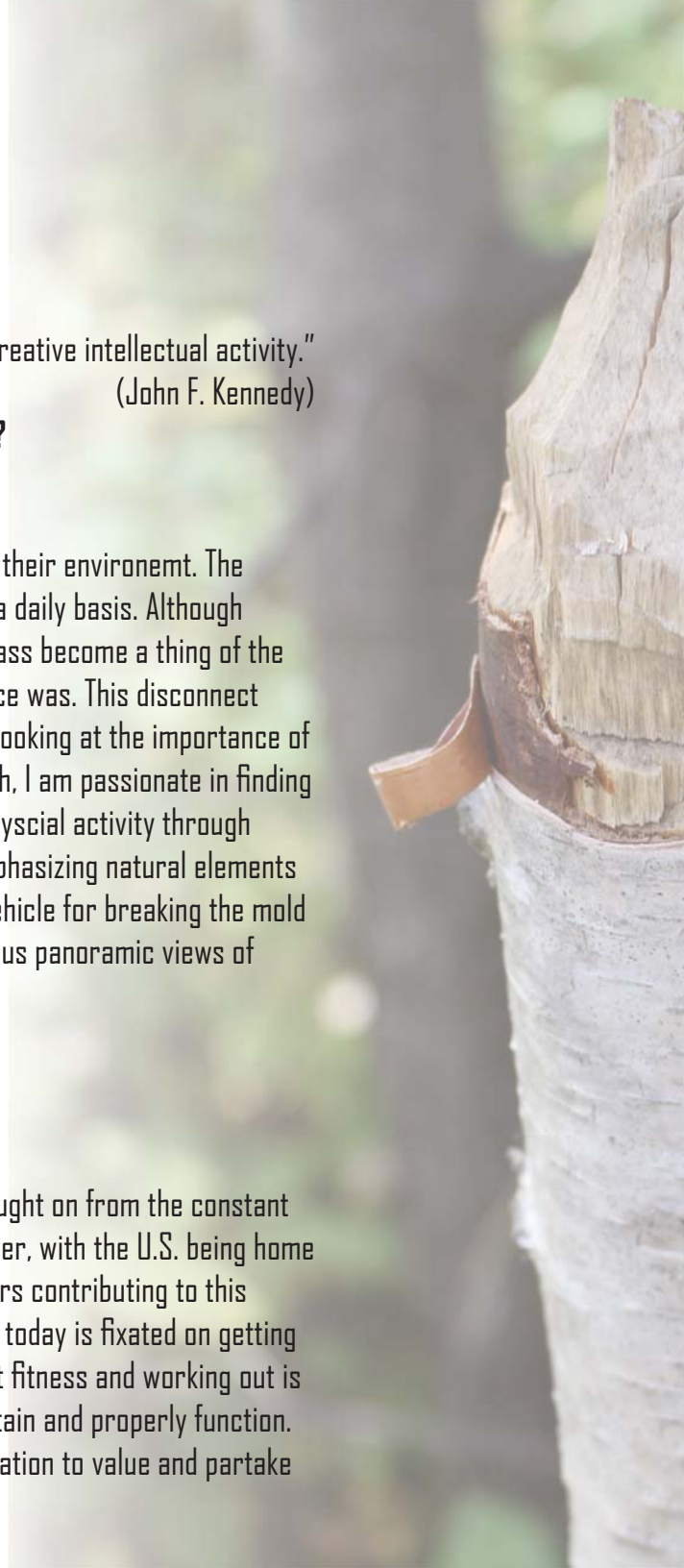
"Physical fitness is not only one of the most important keys to a healthy body, it is the basis of dynamic and creative intellectual activity."
(John F. Kennedy)

Can architecture create a dynamic environment for physical activity by emphasizing natural elements?
Exploring the recreation of fitness design in a natural setting.

Since early childhood, humans have had a profound connection with physical activity, engaging with others and their environemt. The glorious days of 'recess' in early education gave children the opporunity to engage in a variety of activities on a daily basis. Although sports and activities are offered, these scheduled engagements slowly begin to diminish, as recess and gym class become a thing of the past, as we grow into adulthood. By this time, physical activity is no longer built into our daily routine, like it once was. This disconnect with our body's natural movements pose a direct threat to the health of the population, and World as a whole. Looking at the importance of physical activity and nature in my life and its numerous positive effects on my physical, mental and social health, I am passionate in finding a way to get people to be concious about their own health, and to practice regular exercise or some form of physcial activity through architecture and its connection to the environment. Designing a fitness facility that gets people to move by emphasizing natural elements and creating dynamic architecural forms directly aligned my personal and professional passions to create a vehicle for breaking the mold of a traditional fitness club. A partially secluded site located just outside the bounds of town and amidst gorgeous panoramic views of nature takes the gym out of its usual setting, on the edge of the St.Louis River in Superior, Wisconsin.

NEED FOR CHANGE

Today's workout centers are a reflection of the inactive and antisocial notion perpetuated by the seclusion brought on from the constant stimuli of daily life, and the modern human obsession with technology. Current obesity rates are higher than ever, with the U.S. being home to the largest number of obese individuals worldwide. Lack of proper fitness is one of the most influential factors contributing to this epidemic, as its importance continues to slip within the confines of the past. The modernized fitness culture of today is fixated on getting you, "in the best shape of your life, in the quickest time possible." This way of thinking perpetuates the idea that fitness and working out is all about improvements of your physical appearance, rather than the well-being and ability of your body to sustain and properly function. The culmination of changes in products and perceptions within the industry has crippled the ability of the population to value and partake in physical activity, leading to this steadily increasing problem posed on our society.



PREMISE

Back in the time of hunter-gatherers, physical activity was firmly rooted into our culture and daily lives, in order to survive. Additionally, the connection human's posessed with nature was distinclty beyond the capactiy any modern-day citizen exhibits today. Over time, we have lost our way, as physical movement has shifted from a part of everyday life, to becoming a sort of chore. The lack of realization reguarding the importance of participation in physical activity and movement in general has been a direct influence to the skewed perception of what fitness clubs really are. This failure to convince the general public is one main reason people are no longer utlizing these facilities to the extent of their popularity around the time of its conception. In addition, the typical, enclosed and static environment these clubs are composed of fail to create an exciting, comfortable and dynamic environment that motivates the users to move. Architecture specified for physical activity should, through its design and elements, emulate and utilize the exterior landscape in which our ancestors roamed and we, as children, played for hours on end.

THEORETICAL CONCEPT

Going to a place to work out should be much more than a dreaded and monotonous routine of exercises on various high-tech forms of the lastest equipment. Exercising should be one of the highlights of every day, as it provides an outlet for fun, social engagement and interaction with others and the environment. Physical fitness is deeply rooted in our culture and the natural world around us, supplying humankind the pleasure of endless hours of self-preservation in its beauty and wonders. The dynamic qualities of the outdoors should find their way into the organization, circulation, programming, and formal aspects of the design of this proposed breed of fitness club to give users a sense of infinite energy and motivation inspired and provided by nature. Focusing on the views and access to natural elements present on the proposed site, this design aims to motivate people to move by giving the feeling and ability of constantly being outside and providing oportunites to circulate within, around, and on top of the facility and site. Providing a new experience between built and natural creates a dynamic relationship that pushes the boundares of what it means to "go work out".

TYPOLOGY

FITNESS CENTER

Typically, these facilities boast a very limited amount of space, views, and natural light. These facilities vary vastly in sizes, containing an over-loaded selection of workout equipment and select ammenities. However, somr larger health clubs, like the project being proposed, offer a wider range of features such as: an indoor swimming pool, rock wall, running track, gymnasium, and even a cafe. Presenting a multitude of activities both inside and out reinforces the importance of inluding the interests of everyone, briging people together in pursuit of a happier life.

TYPOLOGY

PRECEDENT NARRATIVE

While trying to reshape the way fitness facilities are designed, it is crucial to take note of a number of projects that currently exist within the typology whcih embody specific solutions I look to articulate and incorporate within my project. These factores influence numerous decisions to be made in the coming design. The majority of these studies involve the general aesthetic of the facilities both inside and out, as well as the incorporation of passive solutions to efficiently allow the building to function in its environment. The following precedents also highlight specifics of continuity with site, program, composition, and organization.

SAN WAYAO COMMUNITY SPORTS CENTER

CSWADI, 2015

DESCRIPTION

The large sports complex is tightly tucked in a highrise- residential community. Its soft appearance provides a comfortable experience that is well-lit within, and equally striking out. The building takes what little footprint it has and is able to create both a fitness center and greenspace that functions as one.

STRUCTURE/ SPACE

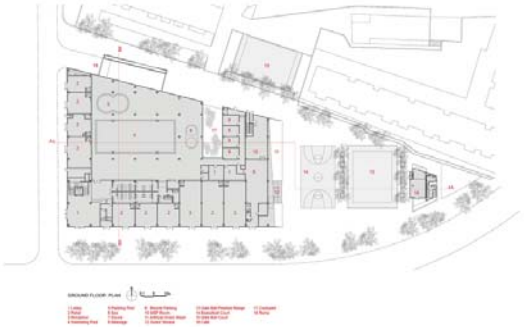
The relationship between structure and space portray a beautiful balance of form and function. The u-shaped glass panels provide a translucent facade that gently shows off its large cross-braced structural elements. The simple arrangement of columns and beams open the space volumetrically as well as illuminated naturally. Every piece of steel is painted to show off its strength and beauty within the larger complex of spaces.

PROGRAM

The numerous functions are neatly divided in layers vertically, staggering its uses throughout.

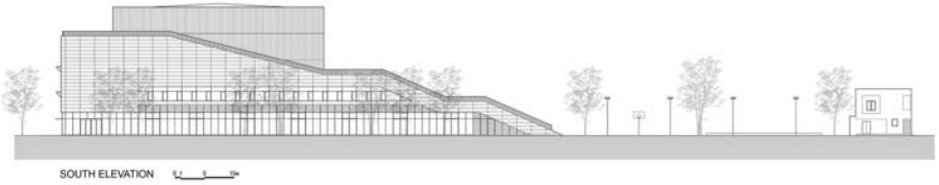
INSPIRATION

Having the idea of literally pushing more space out of the building and site create a unique cohesiveness between the two.



ORIENTATION

The south facade allows for optimal solar gain and views, while still allowing the tiered effect on the stepped greenspace. The building funnels its shape to the East exterior focal point.



REGENT PARK AQUATIC CENTER

MJM ARCHITECTS, 2012

DESCRIPTION

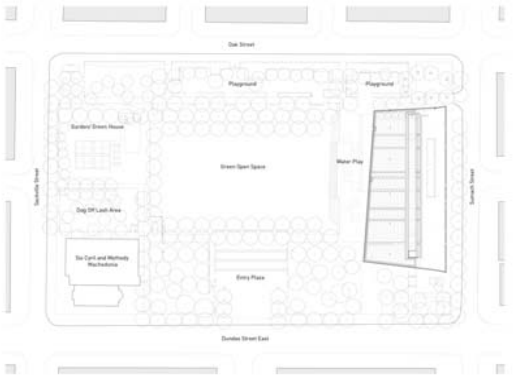
As part of a redevelopment project, this small scale community center brings together many nearby residents of all ages. The transparent facades, open floorplan and streamline shape highlight the area.

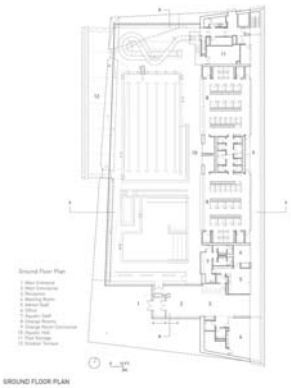
AESTHETIC/ COMPOSITION

The level of detail put into every inch of the building shows throughout the quality of its interior spaces. The numerous layers of partitions and their varying transparencies offer a stimulating gradient rather than the usual monolithic separations. The increase of visibilty provides a degree of safety and certainty while engaging the buildings environment. Quality natural light softly penertates the building facades and corridors creating a natural ambient feel.

SITE

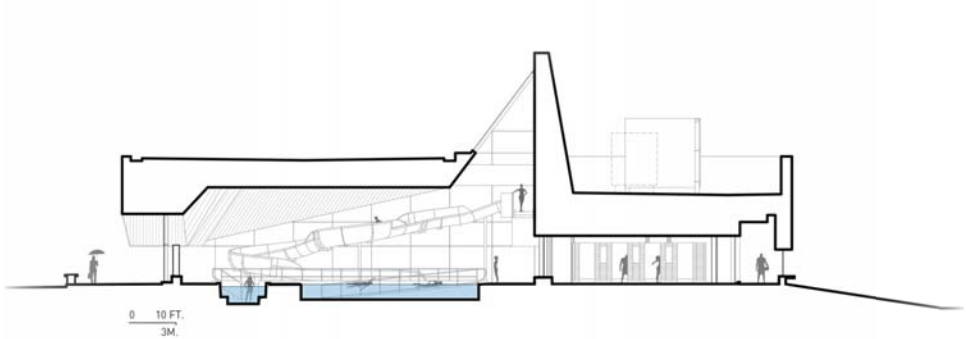
The treatment of the site as a whole provides a unique experience for the community. People can come together inside for a swim, or head to one of the many outdoor greenspaces.





NATURAL LIGHT

One of the most captivating features of this structure is its legantly handled dorsal-fin skylight. Not only does this give an iconic feature to view from the surroounding community, but it also provides an abundance of daylight into the space. Nearly eliminating the use of artificial light saves money, and provides an indoor pool with an outdoor feel.



CONCLUSION

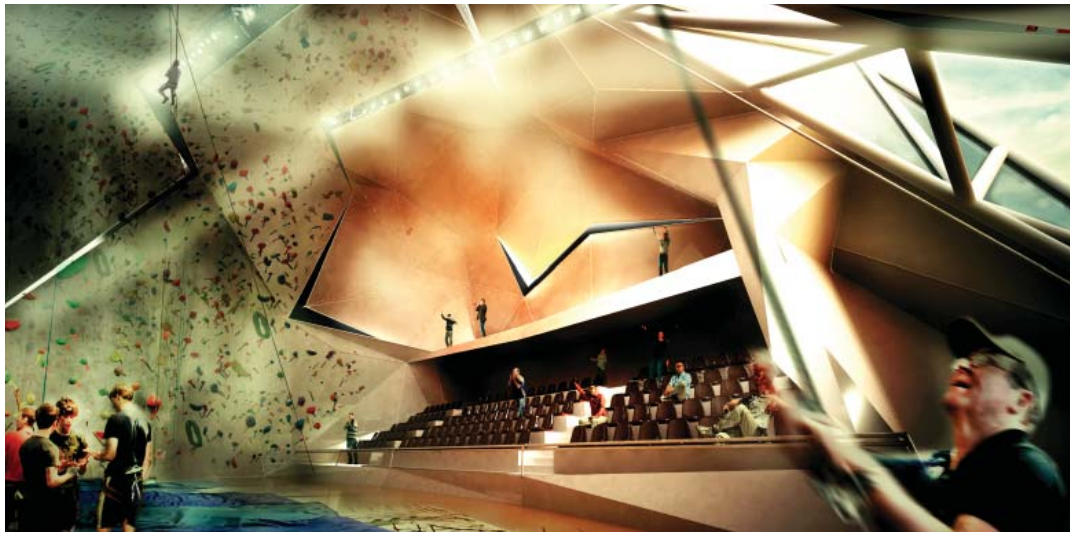
Balancing the use of openings for both natural light and visibility is crucial in creating a space that emulates the outdoors. The dynamic ceilings and overhead conditions create interesting volumetric spaces within the enclosed environment.

ROCK GYM

NEW WAVE ARCHITECTURE, 2014

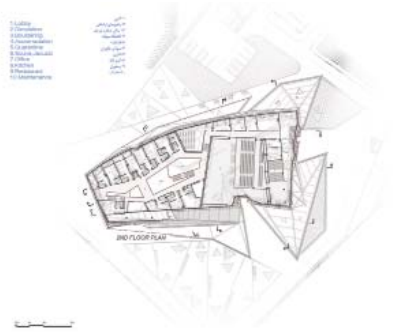
DESCRIPTION

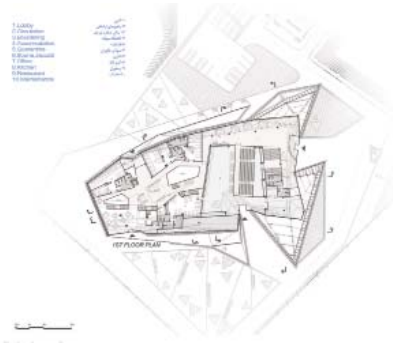
The radical design proposal features a fractured facade that allows light to penetrate into the building, while giving numerous views to the rocky, snow-ridden landscape that surrounds the cement structure.

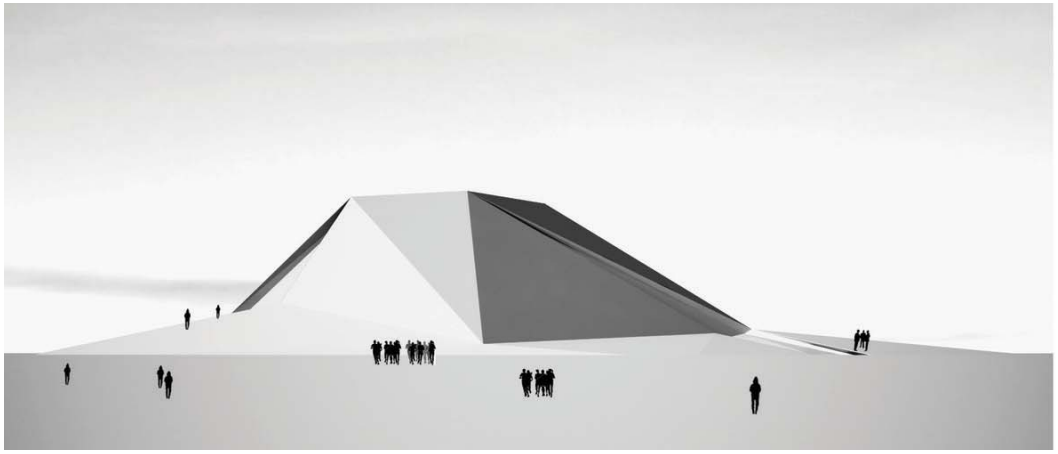


AESTHETIC/ COMPOSITION

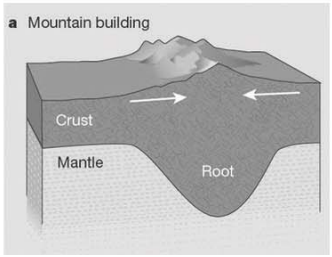
Completely reshaping the way different types of fitness is practiced in doors, this organically angular facility lets the architectural elements become the platforms or obastacles for physical activity.





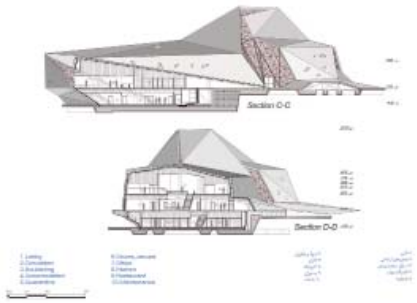


The geological process of the large-scale movements of the earth's crust and its tectonic forces, all end up to initial clues...



IDEOLOGY

Relating the architecture to the Earth and its processes gives this project a deeper meaning that resonates with the building itself.



CONCLUSION

Not only can users experience an interactive adventure with the buildings inner face, but the concept also speculates the ability to scale the exterior facade for a compltely revolutionary site and building experience. Taking the building from serving a purpose primarily for shelter and adding the ability to traverse this manufactured landscape in a new way provided a great amount of inspiration in formulating the fitness center of the future.

LACC MISSION COLLEGE

CANNON DESIGN, 2010

DESCRIPTION

The $38 million dollar project brought numerous aspects of campus life together under one roof. Complete with a variety of workout, flex spaces, classrooms, offices, a three-court gym, and scenic jogging track. This highly efficient facility achieved LEED certification through a variety of technology and systems including an air quality system and low-e coated glass.

AESTHETIC/ VIEWS

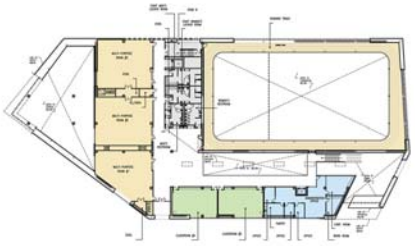
One of the most profound aspects of this building are its beautiful lines of sight, due to the angular composition that compliments its setting. The natural essence of the structure and the large expansive windows allow the facility to breathe as one with the environment, never provoking the feeling of isolation. The rich color palette and local materials allow both the interior and exterior to blend as a single, naturally cohesive element within its surroundings.

PROGRAM

A culmunation of various spaces push for collaboration among multiple disciplines. The floorplan is a conglomerate of four different zones, beginning to change the limits of a typical fitness facility.

ORGANIZATION

The angular nature of the area begins to breathe into the the rigid configuration of the architecture. The spontaneous variability of space uses encourages chance interaction.



CONCLUSION

Incorporating a strong relationship between site and structure is crucial, particularly in dealing with projects like these in unique settings. Pulling apart the building to encourage random social encounters, as well as opening up the space both physically, and visually will provide a strong basis for connecting the project to nature. Using proper scale to construct dynamic spaces can be highly effective, along with a rich color palette.

PROJECT ELEMENTS

FITNESS SPACES
A variety of spaces for physical acts, ranging in scale and sectional qualities. Mix of open space, seating, free-weights, and various equipment.

FLEXIBILITY AREA
Comfortable space for pre and post workout stretching, equipped with areas of flexible privacy. Various equipment.

GYMNASIUM
One full-sized, indoor, all-sport court, with viewing bleachers.

ROCK WALL
Six-sided indoor rock wall, for top-roping application.

TRACK // DYNAMIC CIRCULATION
Excess area for movement and exercise throughout building.

RELAXATION SPACES
A few areas for relaxation and restoration of the body including: an indoor pool and hot tub, and also a relaxed recreation area.

REC COURTS // STUDIOS
Flexible spaces to suit various group or indovidual activites.

SUPPORT SPACES
A mix of vital programmatic elements including: a cafe, childcare services, trainer's room, offices, rec desks, locker rooms, showers, bathrooms, etc.

CLIENT USER DESCRIPTION

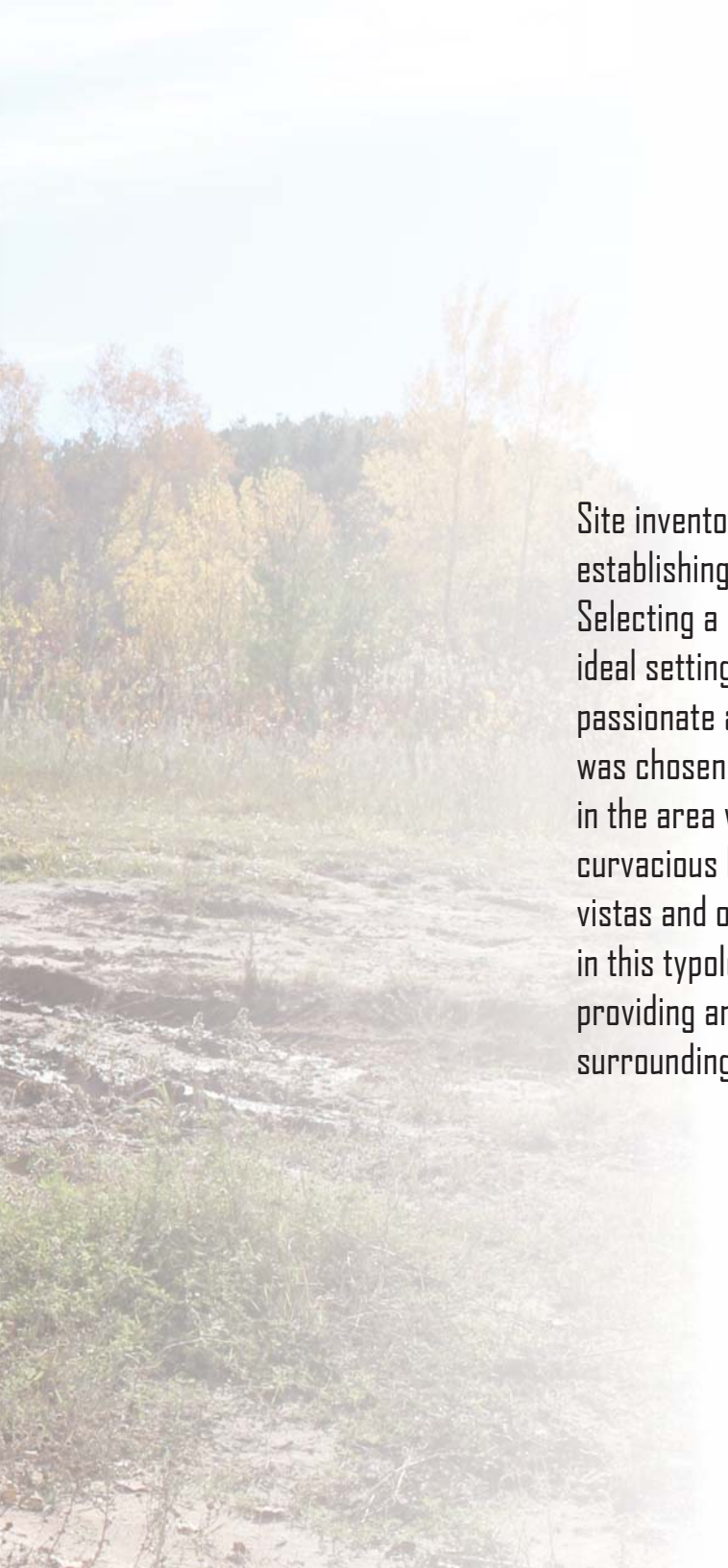
CLIENT DESCRIPTION

A local of Superior, WI, the ex-pro NFL athlete is looking to invest in the first fitness center to kickstart a new wave of clubs across the nation that rethink the way fitness is viewed, approached and executed. Being a physical person all his life, he has now come to grips with the reality of daily sedentary life in the modern world. The client is interested in donating a workout facility to his community to provide ammenities that he never had access to growing up. Also, he hopes that this will spark a new way of providing fitness, social interaction, and appreciation for the environment to the forefront of society.

USER DESCRIPTION

This facility is designed for an entire demographic of individuals within the community, renging from adolescents to the elderly, whether they are able bodied or not, however, the dynamic breadth of this project would mainly attract the more fully-functional individuals. Accomodations are provided to support handicap individuals, giving everyone access to all spaces. Childcare services will be provided to assist parents in getting in their daily activity, along with the peace of mind that their child is being cared for. The residential areas surrounding the site provide the greatest potential for community use. Commuting by means an established bike share program or bus route could establish roots that connect a variety of clients. Additional spaces such as the training room and cafe provide services betond those seeking fitness.

SITE NARRATIVE



Site inventory and reconnaissance played an important role in establishing the proper roots for reaching the goals of this project. Selecting a site in a familiar, yet challenging climate provided the ideal setting to demonstrate my skills in an environment that I am passionate and knowlegeable about. The site in Superior, Wisconsin, was chosen as it was one of the only open waterfront properties in the area with forseen potential and proximity to civilization. The curvacious banks of the beautiful river side lend way for optimal vistas and opportunities for outside activity, not typically found for in this typology. It's unique placement still allows a short commute providing ample opportunity for interaction and connection with the surrounding community.

SITE // INFO

The transition from Lake Superior into the Saint Louis River provides a unique meandering coastline, marking the division between WI and MN. Superior and Duluth are the predominant cities in the area.

The site lies just Southwest of the city of Superior. A large State forest resides to the South. Residential plots dominate the area to the Northwest, before dissipating to the core of the city.

North 28th Street turns into Billings Drive, providing direct access to the site from the city. The plot of land resides in Woodstock Bay.

The site currently serves as an under-utilized boat launch. Tucked back in the woods, only a handful of houses are in view along the surrounding coastline. This separation from a typical gym setting provides an array of opportunities for architectural innovation.

SITE // INFO

- Not only does this location provide an abundance of natural beauty, but it also presents numerous design opportunities, by taking advantage of the topography and bodies of water engulfing the site. Incorporating spaces and activities dedicated to the exterior environment will begin to push the limits of fitness center architecture.
- The secluded setting provides a place to physically experience the great outdoors, and escape from the bustling activity of the inner city. Making the gym a sought after destination, rather than just another stop in town, will bring a new dynamic to the essence of exercise.
- Creating a symbiotic relationship with nature can help induce a communal culture to work together to grow, just like the landscape in which we are placed.
- Giving the community a place to come together in the presence of nature can induce a mutual respect for the importance of caring for ourselves, as well as the environment.

SITE // INVENTORY

CLIMATE

This humid- continental climate region has very similar properties to where I grew up in Minnesota. However, this site is particularly intersting, since the large nearby bodies of water and slight changes in topography effect the local microclimate. This can be particularly useful in the winter, as the lake holds heat and keeps the amount of frist to a minimum. During the summer months, the passive cooling of the breeze passing over the water and onto the site creates a natural cooling effect to the immediate area.

AVERAGE TEMPERATURE	JAN	JULY
HIGH	**22**	**75**
LOW	**5**	**58**

ANNUAL PRECIPITATION = 30.6 inch
ANNUAL SNOWFALL = 55 inch
SUNSHINE = 177 sunny days/yr
PREDOMINANT WIND = 14mph NW

SOILS

The predominant parent material of the soil is considered clayey till. It is moderately well drained with 0-4% slopes. The clay soil is good for plant life including various grasses, wetland/aquatic plants, vegetables, fruit trees, berries and furn bushes.

SITE // INVENTORY

PROJECT EMPHASIS

SPACIAL CONFIGURATION

One of the most important aspects within this design inolves the layout and relationship of spaces on both the interior and exterior of the facility. These decisions are crucial to the overall success of operating a visually and socially stimulating environment that removes the element of judgement, and instill a level of privacy within the public workout experience. The shape, size, and proximity of these elements must also be focused on as dynamic conditions that can accomodate constant change over the life of the building.

SITE INTEGRATION

A truly successful project must encompass a meaningful bond between building and site. This is especially true for in this case, as nature the surrounding environment is a major focal point to the design. Blurring the lines between the natural and built is crucial in creating a building that primarily functions as a physical entity, in which activities take place both indoors and out. Opening the building up to the site's profound vistas can add a visual momento and oasis to be taken advantage of and enjoyed by all users. The revitalization and incorporation of the boat launch that currently resides on the site will add to the dynamic quality of the site, and further integrate the community with its increased diversity of activites and uses.

CIRCULATION // MOVEMENT

Another critical component in the execution of this project was the utilization of a main pathway that coerces the entire building and site, providing a route of access, as well as a means of exercise via walking and running. The circulation ties together the entire spacial arrangement, in addition to solidfying a key bond with the site by way of pathways, stairs, and turf ramps.

PROJECT GOALS

PHYSICAL

ENHANCE AND PROMOTE PHYSICAL FITNESS

First and foremost, the reconfiguration of this typology lends itself to the advocation of physical activity by proposing a new type of facility that enhances the way people work out. The hope is for this facility to be used as a model for others, due to its exceptional ability to get people exercising and enjoying it together at a level that has not been achieved before.

SOCIAL

FACILITATE RELATIONSHIPS BETWEEN PEOPLE AND THEIR ENVIRONMENT

Humans are highly social creatures, yet too often, they go about their day in a singular and repetitive action. Many people tend to keep to this routine, often trying their best to stay focused and uniterrupted as they go about their tasks. This leaves little time for spontaneous social interaction with new individuals, and exploration with the outdoor environment. Bringing people together to work on themselves in the presence of nature is the ultimate way to untap the hidden potential behind new relationships with others and the environment. Ultimately, the intention is to allow people the ability to establish meaningful connections with eachother and nature via architectural solutions.

THEORETICAL

SPECULATE ON THE ISSUE OF HUMAN"S RELIANCE ON TECHNOLOGY

The immaculate abilities that current technologies present mankind, have exceeded the acceptable level of intrusiveness within modern human's everyday lives. The devices that were once supposed to put us in touch with those far away, are now pulling us further from those that are close. This is a serious problem that I hope to address with this project, by re-implementing the importance of physical activity and social/environmental relationships within the schedules of people's everyday lives.


MOVING FORWARD

Culminating the various methods of research into a synthesized system of facts and figures will transition into a fitness center that meets the goals put forth by me, the client, as well as the users. Through research, documentation, analyzation, and iteration; the design will be tested both physically and digitally through various mediums until its notions are accepted as viable proof of the philosophical argument. The fragile nature of this project is pivotal on sticking to the schedule. The phases and techniques for conducting the research and development must be predefined to ensure a successful result. Ahead lie a break-down of key elements and a schedule for their implementation.

A PLAN FOR PROCEEDING

METHODOLOGY

RESEARCH METHODS WILL BE USED TO GUIDE THE EXPLORATORY ENDEAVORS INVOLVED IN THIS PROJECT. AFTER USE OF EACH METHOD, A FULL ANALYSIS MUST BE MADE OF THE RESULTS TO CONCLUDE THE EFFECTIVENESS ON THE SUBJECT MATTER. THESE TACTICS MAY BE REUSED OR DISCARDED, BASED ON THEIR ABILITY TO COMMUNICATE CREDIBLE INFORMATION THAT STRENGTHENS THE ARGUMENT.

PROCESS DOCUMENTATION

A VARIETY OF TACTICS WILL BE UTILIZED IN RECORDING THE STEPS INVOLVED IN THE DESIGN PROCESS. EACH MEDIUM TELLS A DIFFERENT TALE, GIVING AN ALL-AROUND FEEL TO THE DEPTH OF THE INFORMATION. ITEMS WILL BE DOCUMENTED PROMPTLY, WITHIN A WEEK FROM WHEN THEY WERE CREATED.

WRITING - THE MOST PREVALENT SOURCE OF RECORDING WILL TAKE PLACE IN NOTES, WRITTEN BOTH PHYSICALLY AND DIGITALLY. WRITING IS MOST USEFUL FOR CITING REMARKS FROM INTERVIEWS AND EVEN RESEARCH QUOTATIONS.

SKETCHING/ MODELING - THE TOOL OF CHOICE FOR DESIGNERS POSESSES THE ABILITY TO COMMUNICATE IDEAS EFFECTIVELY FOR MULTIPLE FACETS OF THE PROFESSION. HAND DRAWING IS AN IMPORTANT PART IN PRODUCING AUTHENTIC ARCHITECURE, AS IT GUIDES THE FORMATION OF SPACE AND AESTHETICS. INTERPRETING IDEAS IN THE PHYSICAL DIMENSION WILL ALSO BE CRUCIAL THROUGHOUT THE DESIGN PROCESS. DIGITAL MODELING INCLUDES REVIT AND SKETCHUP.

PHOTOS - DIGITAL PHOTOGRAPHS ARE USEFUL FOR OVERALL DOCUMENTATION, AND THE PHOTOS CAN BE USED WITHIN THE FINAL BOOK AND PRESENTATION TO CAPTURE THE PROJECTS PERCEPTUAL ESSENCE.

PROJECT SCHEDULE

- WEEK 1 - **PRE-DESIGN/RESEARCH**
- WEEK 2 - **PRE-DESIGN/RESEARCH**
- WEEK 3 - **PRE-DESIGN/RESEARCH**
- WEEK 4 - **PRE-DESIGN/RESEARCH**
- WEEK 5 - **SCHEMATIC DESIGN**
- WEEK 6 - **SCHEMATIC DESIGN**
- WEEK 7 - **SCHEMATIC DESIGN**
- WEEK 8 - **SCHEMATIC DESIGN**
- WEEK 9 - **FURTHER DEVELOPMENT**, MID-SEMESTER REVIEWS
- WEEK 10 - **FURTHER DEVELOPMENT**, SPRING BREAK
- WEEK 11 - **FURTHER DEVELOPMENT**
- WEEK 12 - **FURTHER DEVELOPMENT**
- WEEK 13 - **PRESENTATION**
- WEEK 14 - **PRESENTATION**
- WEEK 15 - **PRESENTATION**, FINAL DOCUMENTATION DUE
- WEEK 16 - EXHIBIT OPENS
- WEEK 17 - FINAL REVIEW

PRE-DESIGN/RESEARCH

WEEKS 1 - 4

DURING THIS STAGE, ALL PROGRAMMATIC ELEMENTS WILL BE ARTICULATED AND PLACED TO SATISFY THE PROPOSAL AS WELL AS THE PROGRAM. HIGH PRODUCTIVITY AT THIS TIME IS CRUCIAL TO BUILD UP THE MOST SUBSTANCE TO BACK THIS PROJECT.

FURTHER DEVELOPMENT

WEEKS 9 - 12

FOLLOWING MID-TERM REVIEWS, PROJECT WILL UNDERGO SERIOUS SCRUTINY TO ESTABLISH ANY CHANGES TO PLAN AND ADDRESS HIGHLIGHTS/ WEAK POINTS. DESIGN IS THEN FOCUSED TOWARD FINALIZING FLOORPLANS, ELEVATIONS, STRUCTURE AND MECHANICAL. THE LAST WEEK OF THIS PHASE TACKLES SECTIONS AND DETAILS.

SCHEMATIC DESIGN

WEEKS 5 - 8

THIS PHASE WILL TAKE INTO ACCOUNT SITE CONDITIONS AND MAKE DECISIONS ON THE OVERALL DESIGN AND FEATURES. GENERAL MAKEUP OF SPACES AND THEIR COINCIDING FUNCTIONS WILL BE DETERMINED.INCOPORATING A HIGH LEVEL OF DETAIL WILL AID IN FEEDBACK RECEIVED FROM UPCOMING REVIEW.

PRESENTATION

WEEKS 13 - 15

THE LAST FEW WEEKS LEADING UP TO THE FINAL SUBMISSION INVOLVE PRODUCING THE FINAL GRAPHICS AND RENDERINGS, AS WELL AS THEIR COMPOSED BOARDS. ALL DESIGN WORK BESIDES PLACING AND PHOTOSHOPPING RENDERINGS MUST BE COMPLETE PRIOR TO THIS STAGE, THE LAST WEEK WILL ALSO BE PREP FOR THE ORAL PRESENTATION.

A PLAN FOR PROCEEDING

RESEARCH

One of the most powerful tools available for this project involves the key component to the theoretical background, research. These valid sources provide strength and credibility in framing the overall argument. Documenting these sources will be done by taking notes in a specified book, along with digitally catalogging these sources online. This critical information will be evident throughout the entirety of the project.

PROCESS

Keeping an exntensive collection of all process work, whether digital or sketch form, is vital to the development of the project. The presence of multiple iterations throughout the desgin process helps convey the intuitive, problem-solving thinking and manipulation that takes place when moving from one design decision to the next. Well-documented process is one of the pillars this project will rest upon.

DELIVERABLES

In addition to the previously mentioned items, there will be an array of physical elements to emulate and describe the final design to the audience. Some physical modeling will be done to explore ideas involving architectural form, space, and movement. The majority of the final representation will consist of several beautifully crafted renderings depicting the different areas in and out of my building.

PROJECT DELIVERABLES & DOCUMENTATION


RESEARCH

Advocating Social & Communal Fitness through Wellness Center Design

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10/11/16

Premise

Workout centers are everywhere. While some may be better than others, they generally follow the same stereotypical format used in the one down the street. Today's traditional fitness clubs provide reasonable convenience and a wide range of workout equipment, but with all of these great tools at one's disposal, why do we still see so many people not utilizing these facilities? A handful of the reasons include the abundance of noise, smell, people, and the lack of outdoor views and spaces. But the most prevalent of these issues lies within the knowledge, perceptions and fears of the users themselves, along with a disconnection between one another.

Although it may seem that these may be personal issues related to the individual, the reality is that countless people feel judged and intimidated due to the way gyms are typically set up today. Additionally, a lack of knowledge on proper use of equipment and techniques can increase this effect, straying people away from these types of places. Many people that need to use these facilities most abstain from their use due to the overwhelming arrangement of the workout center and its pieces, along with the lack of a sense of social well-being and community amongst other users. Which leads to a perplexing question: How can architecture affect the sociological aspects of a gym? By altering the appearance, setting, location, and spatial organization of the facility, people of all fitness levels will be provided freedom and flexibility of a comfortable, intimidation-free environment. This re-arrangement will also stimulate a more communal culture within the gym that motivates more people to become a part of it.

Spatial Organization

Flexibility

As technology, equipment and workout styles continue to progress and diversify, so should the spaces that hold these activities. Developing a dynamic environment with constant flexibility allows for these changes to be adapted to the new fads that come and go within this discipline. For example, the once wildly popular exercises 'Zumba' and 'Pilates' are now almost non-existent due to this constantly changing market. Creating spaces that can be quickly partitioned off or opened up can allow for this sense of constant variability. The chosen structural design can also play a hand in generating a constant shift of elements to accommodate for these continuous changes, without having to do extensive work to the makeup of the buildings components. The Whole Building Design Guide, a program of the National Institute of Building Sciences, suggests that:

> Flexibility is critical in Fitness Center design as equipment technology is constantly changing and sports and classes move in and out of fashion. Consider a raised flooring system in the fitness spaces to accommodate equipment with data connections for fitness tracking and to facilitate changing and rearranging equipment. Provide ample storage for fitness supplies and equipment to meet changing needs. For group exercise rooms, consider designing one large partitionable room rather than multiple smaller rooms. This will allow the room size to change as classes wax and wane in popularity" ("Fitness Centers | Whole Building Design Guide," n.d.).

Thinking ahead about these evolving spatial and technological challenges can create a new precedence in wellness centers, and architectural design as whole, that predicts and prepares for the future.

Advocating Social and Communal Fitness through Wellness Center Design

Personalization

A common complaint across the board with workout facilities is the lack of smaller personal spaces to fully focus on specific workouts. While many activities can take place in larger areas, some users need private space to perform more exotic routines or even just prefer being by their lonesome while working on their body. During my research, I found a health-related forum, Idea Health and Fitness Association. One post in particular was related to reasons that people don't use public gyms. One woman commented, "If I work out at home I can try out new things and move my body in ways that would attract too much attention at a public gym." ("What are some reasons people do not like going to the gym?," n.d.). By providing intimate spaces, users that partake in some of these more private routines can have an area to do those specific exercises, while still having access to the rest of the facility and its amenities that are nonexistent at home.

One other prevalent issue people are faced with in choosing a wellness center is finding the right atmosphere in which they can focus and feel comfortable being in. Many facilities currently blast different types of music, or attract a specific group of individuals. A wellness center should be an all-inclusive space that accommodates every type of person, regardless of their background. Providing spaces that can be easily manipulated via sound or aesthetics can allow for increased flexibility among its users, attracting people from all walks of life to come together under one roof.

Layout

Adding on to the aspect flexibility and personalization, another reconfiguration that needs to be made is the general layout of these facilities. Currently, the main exercise areas boast vast open floor plans which leave many users feeling overwhelmed and exposed. These situations can make inexperienced users feel especially intimidated, even causing them to no longer attend fitness facilities altogether. Marlan Eller, a personal trainer, said "In my experience, the number one reason why a lot of people don't go to the gym is that they're afraid that they'll be judged. I think this feeling is due, in part, to the fact that exercising can be unnatural to a lot of people. With the various machines and all that iron, it's easy to get overwhelmed and intimidated when you walk into any gym these days." ("What are some reasons people do not like going to the gym?," n.d.). Another fitness instructor, Andrew Halligan, commented, "People prefer to work out with those who are [in] the same boat. If they are out of shape or unskilled at certain exercises, they will feel out of place among a minority of regular gym-goers. They would be much more comforted to work out in a private setting or in a gym with mainly out of shape people." ("What are some reasons people do not like going to the gym?," n.d.).

By providing smaller areas, perhaps with varying degrees of skill level, people at all different points in their overall fitness can feel comfortable to come and let loose in their workouts. In addition, breaking up the masses into groups of equally athletic individuals will help users to feel like they are not alone in this journey. One way that this could be achieved is by having a succession of separate areas designated to these groups, with increasingly difficult pieces of equipment, and decreasing levels of instruction. As members become more

experienced and comfortable in their environment, they may choose to move up to the next level, eventually joining a large public workout area. Additionally, the implementation of an introductory course to go over general equipment usage and safety would be useful in creating an easy transition for newcomers. Perhaps the greatest benefit to this proposed process would be the potential for circulation of knowledge, and formation of relationships between like-minded individuals.

Social Aspect

The greatest potential that presents itself within this typology is the possibility for social interaction and communal well-being. Too often, exercise in public facilities is viewed as a singular task, with people listening to head phones and going about their business without hesitation. This internalization causes a lingering sense of competitiveness, and hinders interaction with peers. Not only are our cellular devices taking us away from face-to-face communication, but these public spaces that are supposed to be there to improve ourselves together, are fueling this epidemic. Interestingly enough, others have also made this observation:

> "…isolating activity is increasing in the society because more and more people find it difficult to spent free time with neighbors or other people in the community. [38,39] In addition, they also identified that the high speed electronic communications including internet often glued people to the computer screen which often left leaving them socially isolated from others. There is no immediate answer to this issue" (Omar-Fauzee, Yusof, & Zizzi, 2009).

Breaking the barriers that continue to set us apart from one another can allow us to stimulate our innate desire for community and interaction among like-minded individuals. Beginning to

tackle this issue through the reconfiguration of a wellness center would be an incredible feat within this project.

It is obvious that the presence of others working hard around you has a definite impact on your own motivation to do the same. The benefits of physical activity and social interaction can reap much greater rewards than the traditional self-centered approach. "Almost every study that has examined the relationship between physical activity and social support has found a strong positive association. This relationship has been studied in both cross-sectional and prospective studies … Friend and family support have been consistently found to influence participation in physical activity across wide range of population groups." (Ståhl et al., 2001). The correlation of social relationships and athletic production shows just how intertwined these two elements are. Reaping the full benefits of this public space through physical activity and social interaction will amplify the efficiency and efficacy of the building and its inhabitants, creating a constructive and cohesive alliance.

Appearance

Another key to improving typical modern fitness centers, lies in updating their appearance. Whether it is the same mundane interior finishes, or the repetitive brick clad exterior, the image of the facility is crucial in captivating and inspiring the user to make themselves look and be the very best version of themselves. By studying the application of contingent surfaces, I plan to work with the environment and enhance its features through the use of both rigid (man-made) and smooth (natural) elements to create a dynamic aesthetic

both inside and out. Working with the landscape, rather than fighting it, can pose new opportunities for interplay of amenities and equipment relative to its uncultivated setting.

The exterior of the complex plays a key role in setting the stage as the face of a new breed of exercise facilities. Approaching the building should be an exciting and motivating experience that can fuel your determination for self-improvement. However, this is not always the case today. From observation, I have noticed that many people breathe a sigh of regret upon entry, not looking forward to the beneficially lacking experience that awaits them. There is a great deal of potential that has yet to be harnessed in regards to creating an all-around positive experience both outside the structure and within.

Looking at the interior of the facility, one of the biggest improvements that can be made involve creating a stimulating environment that engages and motivates the users to focus on the task at hand. Providing mirrors, views to the exterior and operable facades can help broaden the feel of the space, and take a user's mind off of the strenuous activity. "Dr Ulrich cites access to nature as a primary means of distraction. Ulrich[15] studied moderately stressed individuals, and found that more positive feelings resulted when these individuals were exposed to nature scenes than when they were exposed to urban scenes." (McCuskey Shepley, 2006). Harnessing vistas of naturally occurring beauty will break up the monotony of interior space, and aid in making the workout a more positive experience. Allowing the building the flexibility of opening up to the environment rather than be a completely separate entity will push the limits of a fitness center to a whole other level.

Setting

Perhaps the most important element of location is the buildings continuity with the environment. Picture your local Planet fitness or even the NDSU Wallman Wellness Center, for example; what types of vistas are you given to take your mind off of the physical and mental stresses of strenuous activity? From my memory, I recollect a whole lot of concrete, cars, and handful of grass. Now ask yourself, is that very inspiring or pleasing to look at? I say we can do MUCH better.

It is rather interesting to ponder the plethora of opportunities the Earth presents us. Within the typology of fitness, it is easy to recognize just how rooted our culture is with activity and the outdoors. Numerous sports and athletic events require the elements presented in the outdoors. With the addition of a site composed of dynamic geography and natural features, the opportunities are endless. So with all of this being said, why not incorporate the environment of the site to be an integral part of the facility and its function? In my mind, it makes a great deal of sense to deviate from the norm and consider all of the possible benefits that a more retreat-like establishment could offer. Bringing people together in the presence of nature can stimulate a positive drive towards aspiring to their physical goals. "Urban green spaces encourage exercise and are a more restorative environment than indoor settings, with a greater positive effect on mental health." ("Mental Health :: Green Cities: Good Health," n.d.).

Along with all of the benefits the outdoors present, its challenging features can be taken full advantage of within the vicinity of the complex. Workouts can be moved outdoors, whether it be cardiovascular type activity such as running and swimming in the nearby river.

Implementing outdoor fitness classes, such as yoga, and even sporting events could further draw people to the area.

Location

Any successful gym must look at the critical importance of its location, relative to its surroundings. Typically, you will find that most gyms operate just about anywhere, and in many cases, walking distance from one another. They are usually surrounded by department stores and other name-brand outlets, protruding from the seemingly never-ending concrete of suburbia. This over-convenience further amplifies the implications of commodity building, pulling us further away from meaningful design that is intrinsic to our positive development as a society. Placing useful architecture outside the bounds of typical situations can push our appreciation for the continuously diminishing natural world.

The most obvious issue will be locating a site that resides away from the typical urban landscape amidst abundant natural beauty, as well as being reasonably convenient to access by the general public. By locating this facility on the edge of the dense city limits and on the cusp of a heavily populated residential area, commuters can take advantage of both accessibility and the bliss nature has to offer. The culmination of community between both the city and residential dwellers can provide ample opportunities for everyone in the area. Bringing people together in a captivating environment can help break the monotony that urban sprawl and technological advances have done to pull people apart into their own separate worlds. Taking

advantage a naturally dynamic site can help focus our efforts on cherishing the environment and our bodies as a whole.

Justification

Why is it important to rethink the way we place and put together our wellness centers of the future? Well, we all know that it is very important to take care of our body, mind and soul. Most people don't have a place in their home where than can escape from every day duties and work their overall well-being. Not everyone has access to the expensive expanse of equipment sought after by beginners and experts alike.

Today's gyms are not currently providing the holistic approach to wellness that should be enjoyable by all. While one can work at perfecting physique, they will be wasting precious time that could be used to allow their body to fully detach from the stressors of life through captivating scenery and social interaction. With proper use of location, setting, appearance, and programmatic configuration, fitness centers can advocate the importance of community and bodily wellbeing. Providing a place where people can comfortably escape, come together with others, and work on themselves in the presence of nature would be the ideal goal in this project. By rewiring the typical format of a wellness center through the importance of social influences, our diverse culture can thrive as a cohesive synthesis of physical and communal wellness.

Annotated Bibliography

ACSM | Articles. (n.d.). Retrieved October 11, 2016, from https://www.acsm.org/public-information/articles/2016/10/07/benefits-of-group-exercise

Although not specifically cited within the report, this resource from the American College of Sports Medicine talked about the importance of group exercise, and some of the benefits associated with it. Much of this information was geared towards group exercises with an instructor in a closed setting. Although most of what was talked about has an underlying relevance to the issues being addressed through this design project.

Exercise Can Make You See the World in a Different Light. (2014, August 2). Retrieved from http://www.timigustafson.com/2014/exercise-can-make-see-world-different-light/

This article by Timi Gustafson R.D. provided inspiration and direction of the importance of exercise on our bodies. She provided examples as to some of the benefits of physical activity, especially on an individual's mental health. Much of what was talked about was not directly applicable to my arguments, so this piece was supplementary research to my findings within the design goals.

Finkelstein, E. A., Trogdon, J. G., Cohen, J. W., & Dietz, W. (2009). Annual Medical Spending Attributable To Obesity: Payer-And Service-Specific Estimates. *Health Affairs*, *28*(5), w822–w831. https://doi.org/10.1377/hlthaff.28.5.w822

Although not referenced, this government bodied entity, President's Council on Fitness, Sports and Nutrition, supplied a wide range of statistics related to exercise among U.S. citiziens, and the lack thereof. Obesity was also included in the figures that showed a

wide range of individuals currently struggling with their weight. These stats showed direct correlations between the low numbers of workout participants and the high number of overweight people.

Fit With the Trends -- Updating Fitness Offerings to Meet Everyone's Needs. (n.d.). Retrieved October 11, 2016, from http://recmanagement.com/feature/201311FE02/4

This article suggested direction for the constant change of wellness centers due to the eb and flow of various exercise fads. It also hinted at implications of certain design decisions associated with the facility. One portion even started suggesting various programmatic pieces for the improvement of these spaces. I did not directly reference any material from this source, however it made a great springboard for addressing various issues within the design.

Fitness Centers | Whole Building Design Guide. (n.d.). Retrieved from https://www.wbdg.org/design/fitness_centers.php

This resource offered a great deal of information needed to create a wellness center that embodied every aspect of a holistic gym. The reading dug deep into the programmatic elements of fitness center design considerations and organization. They also touched on some of the emerging issues within the discipline that be taken note of for the design of this project.

fitness-and-exercise-spaces.pdf. (n.d.). Retrieved from https://www.sportengland.org/media/4203/fitness-and-exercise-spaces.pdf

Much like the last resource mentioned, this larger guide served as an ingredient list for every piece of a wellness center that must be incorporated to

accommodate all of its users needs. This document will serve as a bottom-line standard for what to include in the design of this project moving forward. One special piece worth noting from the reading is the inclusion of ADA useable equipment and facility. It is very important that this facility incorporates all guests and offers the same level of flexibility and treatment for each and every individual.

McCuskey Shepley, M. (2006). The role of positive distraction in neonatal intensive care unit settings. *Journal of Perinatology*, *26*(S3), S34–S37. https://doi.org/10.1038/sj.jp.7211584

The work done by Roger Ulrich emanates every aspect involving nature through design, which is to be incorporated into this project. He has done many studies on the effects of nature in the healthcare industry, and their benefits on health and recovery. Although he focuses mainly on rehabilitation, the work he has done ties in well with the importance of location and setting throughout the project.

Mental Health :: Green Cities: Good Health. (n.d.). Retrieved October 11, 2016, from https://depts.washington.edu/hhwb/Thm_Mental.html

This resource delved specifically into the benefits of nature and green space on our mental health and society as a whole. Much of what was talked about strikes at the same principles being applied to the exterior of this design. It was important to note not only the physical benefit of natural elements, but also the mental aspect to these issues as well.

Mercer, L. M. (n.d.). Social Benefits of Exercise. Retrieved October 11, 2016, from http://exercise.lovetoknow.com/Social_Benefits_of_Exercise

Mercer pointed out the importance of social equity on a physical setting. Provided examples of groups that formulated through various activities, and the positive implications associated with these relationships.

Omar-Fauzee, M. S., Yusof, A., & Zizzi, S. (2009). College Students' Attitude Towards the Utilization of the Sport Recreation Center (SRC). *ResearchGate*, *7*(3). Retrieved from https://www.researchgate.net/publication/242083290_College_Students'_Attitude_Towards_the_Utilization_of_the_Sport_Recreation_Center_SRC

This research paper on a college campus recreational center provided unique insight of both users and non-users of the facility. The authors provided insight from individuals, backed up with reputable sources to signify the claims. He also touched on one of the most interesting phenomenon that presented itself throughout my research, which was the disconnection of human interaction due to cultural influences and technological advances.

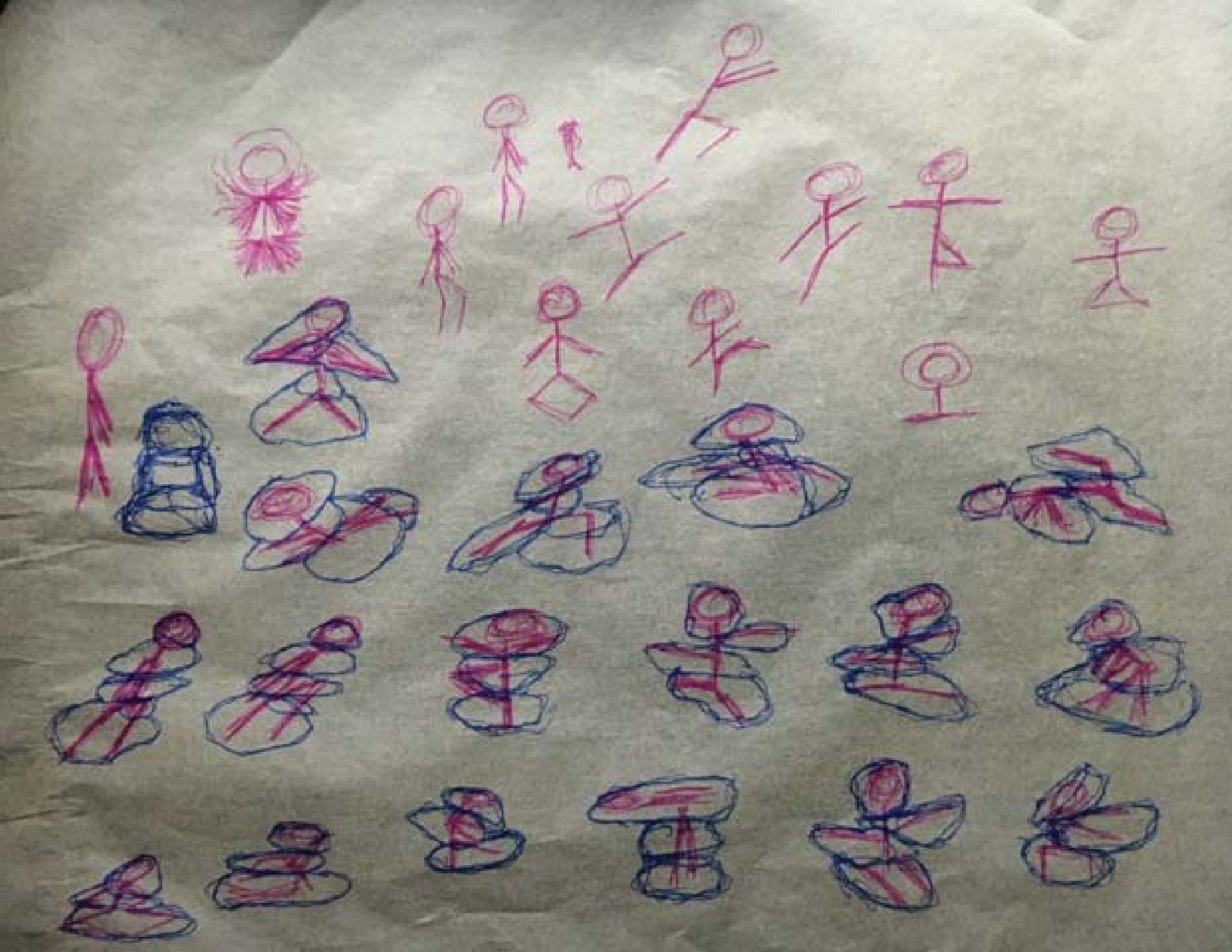
Ståhl, T., Rütten, A., Nutbeam, D., Bauman, A., Kannas, L., Abel, T., … van der Zee, J. (2001). The importance of the social environment for physically active lifestyle — results from an international study. *Social Science & Medicine*, *52*(1), 1–10. https://doi.org/10.1016/S0277-9536(00)00116-7

This article shed light on the strong correlation between physical activity, social interaction, and the positive implications associated with these elements. Many studies referenced showed the positive effects of these stimuli on mental and

physical levels. Additionally, these seemed to have an effect on behavioral choices, indicating positive reinforcement of these ideas.

What are some reasons people do not like going to the gym? (n.d.). Retrieved October 11, 2016, from http://www.ideafit.com/answers/what-are-some-of-the-reasons-people-do-not-like-going-to-the-gym

Hearing input from various people directly involved with physical activity and personal training allowed me to gain insight on some of the most prevalent issues faced with these facilities today. Many of the posts on this health forum coincided with one another, unveiling issues that were most common among our population. Not only did this provide personal issues, but problems were also identified from observing their clients that are new to working out. Incorporating some of the quotes on concerns and experience within the field provided real-life testimonies that are affecting our culture and their lack of exercise today.



INSPIRATION

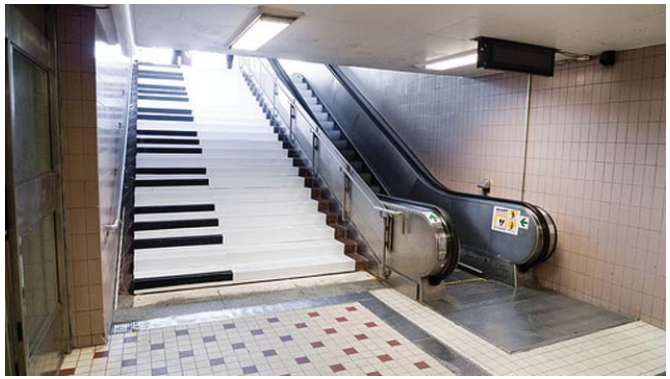
The key to being physically fit is all about finding and staying at a point of balance. Everyone achieves this point of homeostasis through a different journey or path of decisions and experiences. The idea of perceiving a stack of rocks in balance is symbollically powerful through the realization of its ability to transfrom its compostion, based on your perspective, yet still remain in balance.

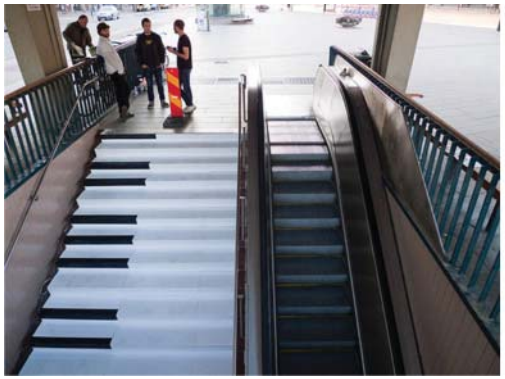
How can I get people to move?

Thefuntheory.com

An initiative of Volkswagen

This site is dedicated to the thought that something as simple as fun is the easiest way to change people's behaviour for the better. Be it for yourself, for the environment, or for something entirely different, the only thing that matters is that it's change for the better.





MOTIVATING WITH FUN

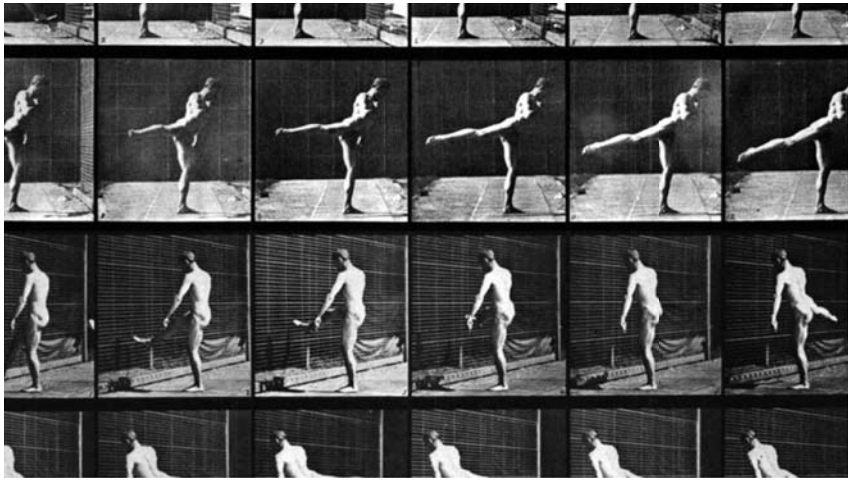
Making things fun is perhaps the simplest way to adjust one's behavior, no matter the situation. Something as easy as the slightest twist on a traditional object or practice can provoke interest and its encourage its use.

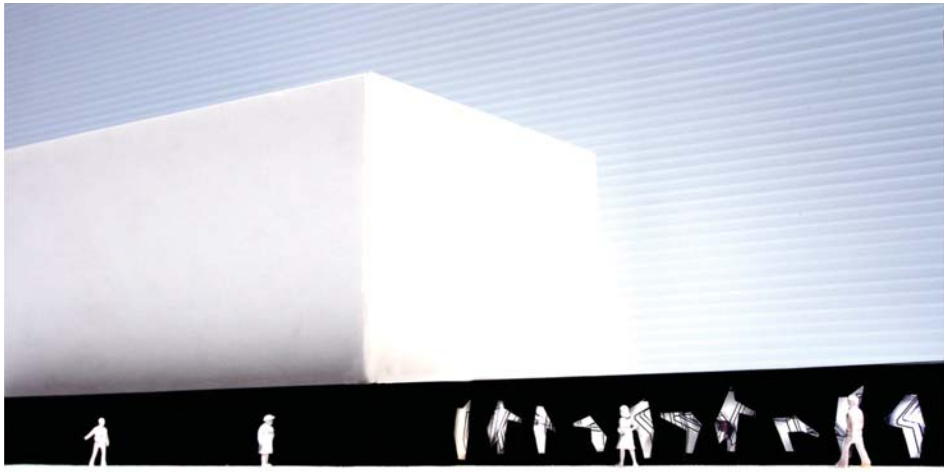
FUN THEORY

DESIGN THINKING

INNOVATIVE THINKING

A little creative inspiration can go along way when talking about changing people's behavior for the better. Not everyone believes working out is enjoyable, although introducing the element of fun through architectural innovation using this type of thinking is crucial in predicting the solution for the fitness club of the future.



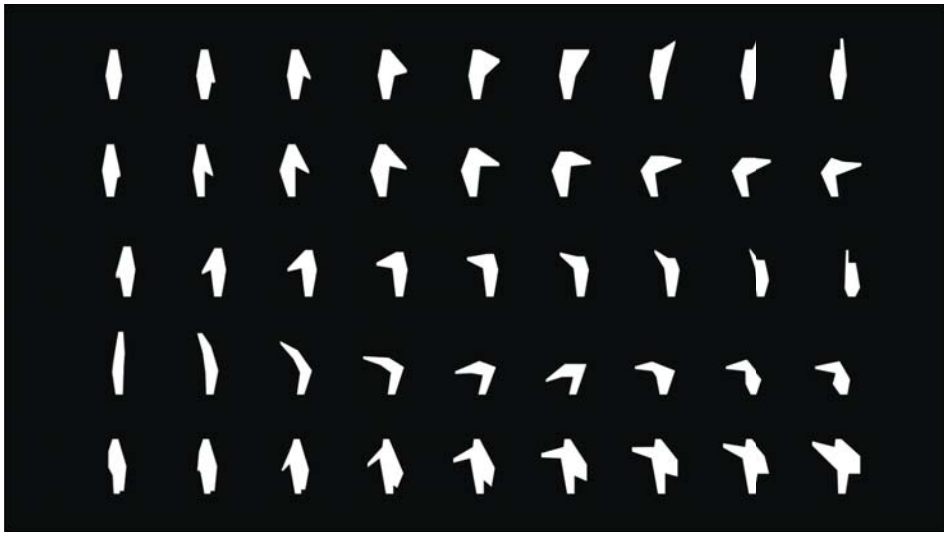


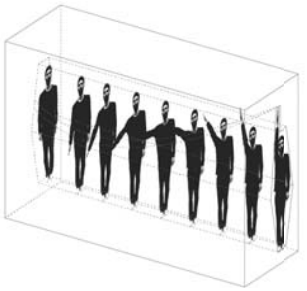
FORMALLY MOTIVATING MOVEMENT

As a response to combining the idea of balance, and the similarities seen between rocks and our bodies formal qualities, I began thinking about ways I could shape the body to perform certain postitions or movements via architectural forms. Which led me to find this project in my research, later inspiring my design.

JACOB ESOCOFF

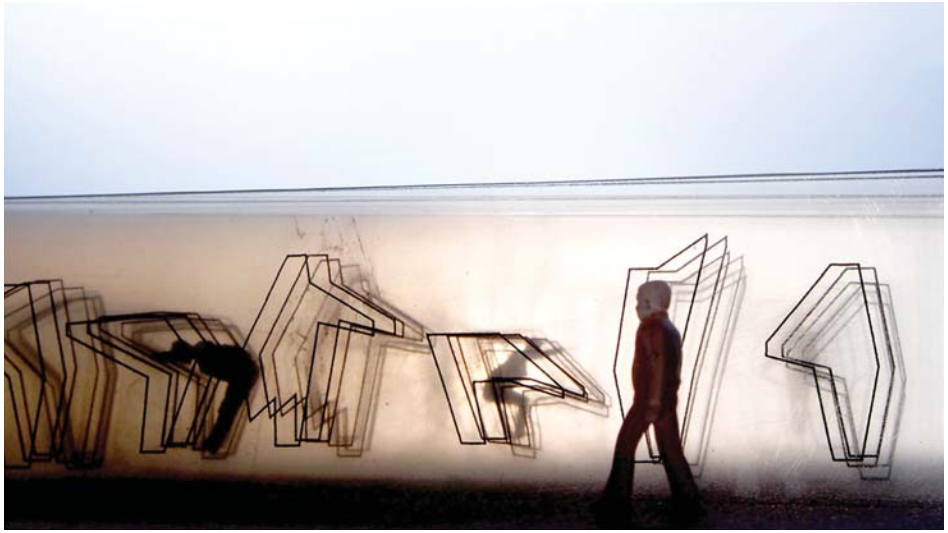
Health Club

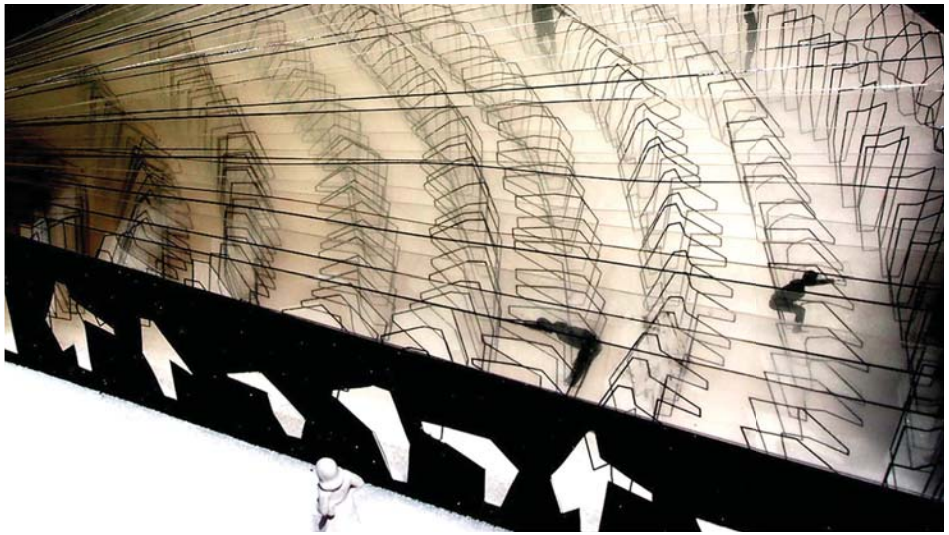




Inspired by Eadweard Muybridge's early studies of humans and animals in motion, these images explore how a simple motion of the body can translate into a physical space. Digital tools were used to record and trace the motions of my own body. Frames captured by a camera were imported into digital space and pulled apart in order to define the boundaries of a new space created by the initial motion.

This Health Club is composed of ten single occupancy meditation tunnels. The interior of each tunnel is formed by a meditative movement and guides the user's body through these motions. Each tunnel empties onto the sidewalk where the user emerges through an aperture in the facade. The tunnels are made of a translucent plastic to allow light to penetrate as well blur the body of other users giving a vaguely communal feeling to an otherwise solitary experience.





What does it mean to be fit?

fit

adjective

1. (of a thing) of a suitable quality, standard, or type to meet the required purpose

2. in good health, especially because of regular physical exercise

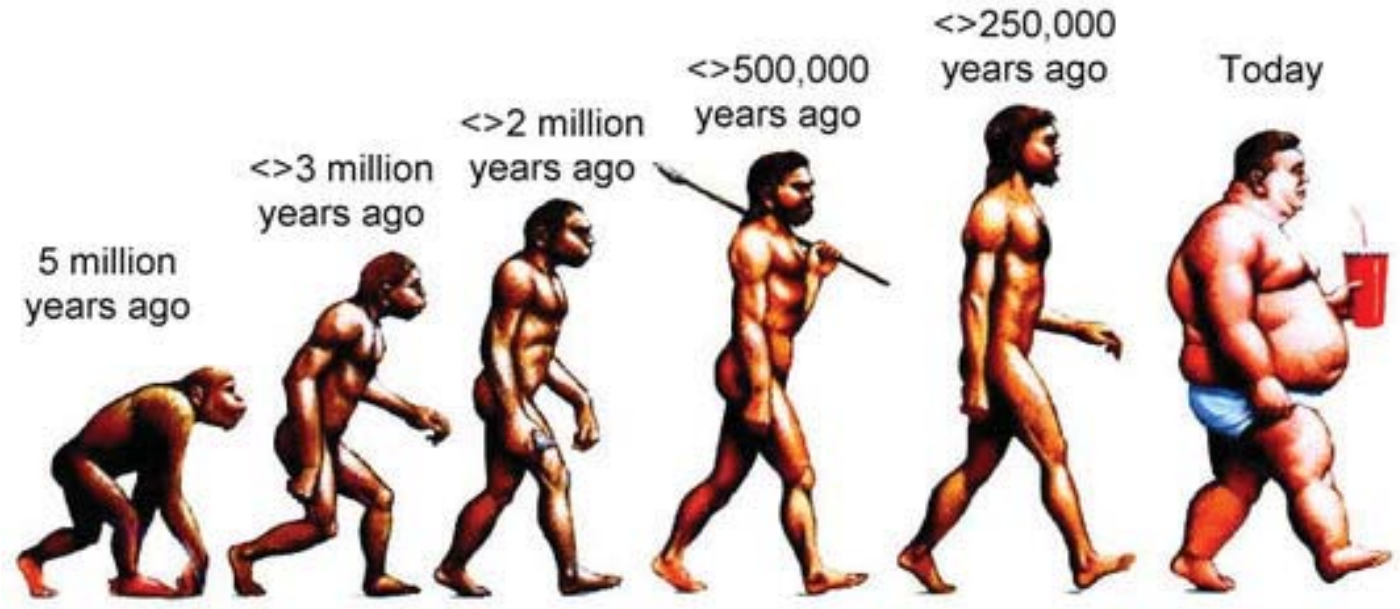
verb

1. be of the right shape and size for

Why do we need to be fit, and why is physical activity important?

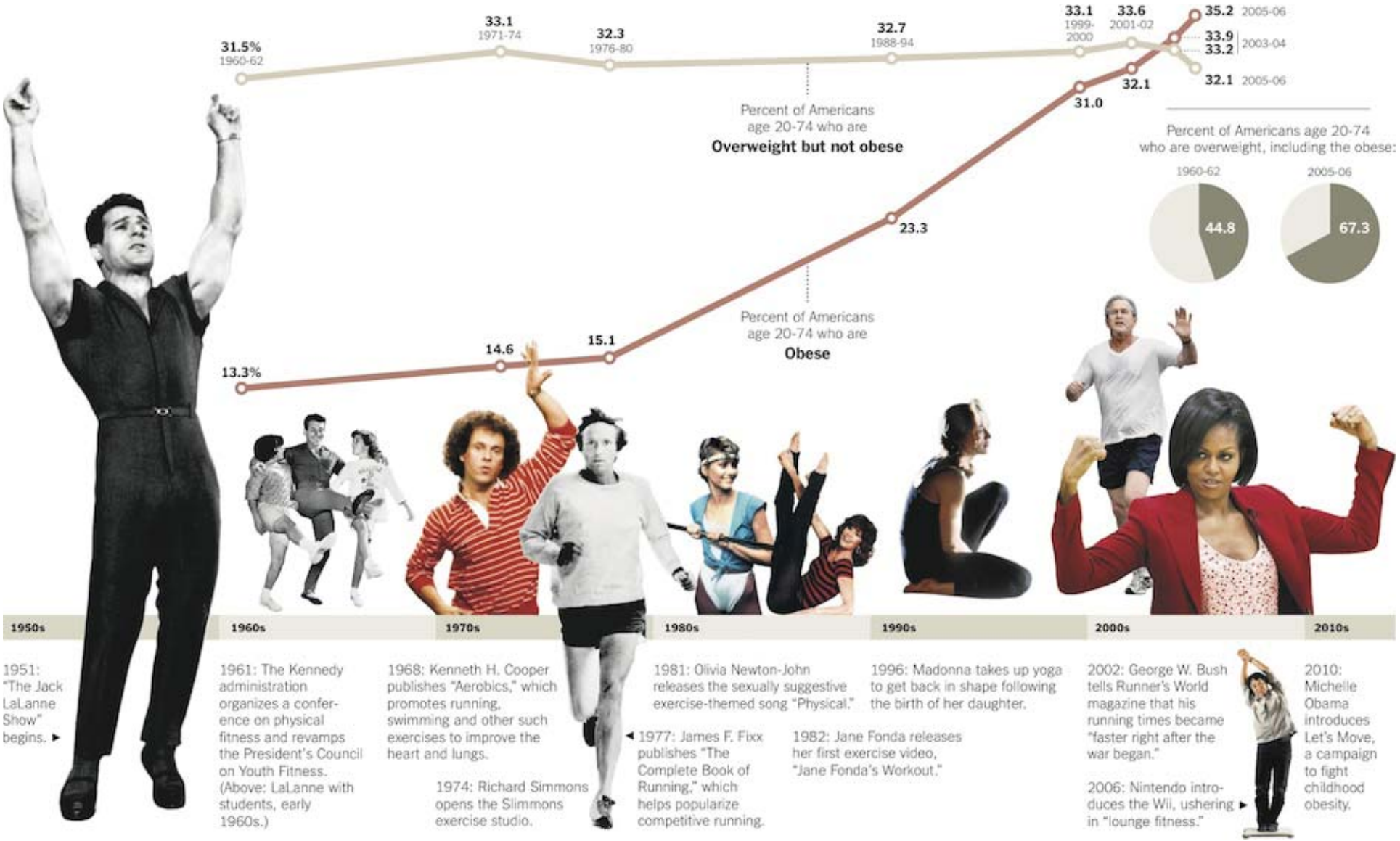
Being fit allows people to live life to the fullest, without physical limitations.

Being fit allows your body to be healthy, ward off disease, and stay intact as your body ages over time.



The modern ideal of what it means to be fit and its general importance to one's life has been diminished. The health and fitness industry have alot to do with this in there efforts of converting the practice of physical activity into a moneymaking enterprise.

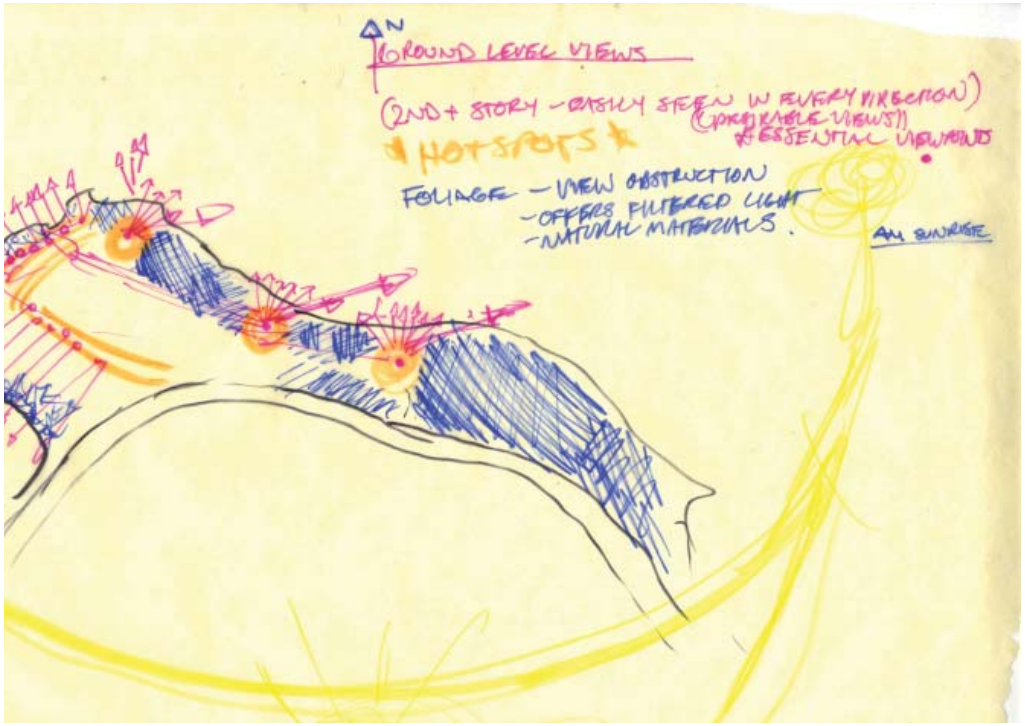
The misconception of the primarily pysical idealization of what it means to be fit has leeched into the attitudes and habits of our society, as the value of exercise is currently only so good as to the eye's of the beholder.



Why did fitness clubs originate?

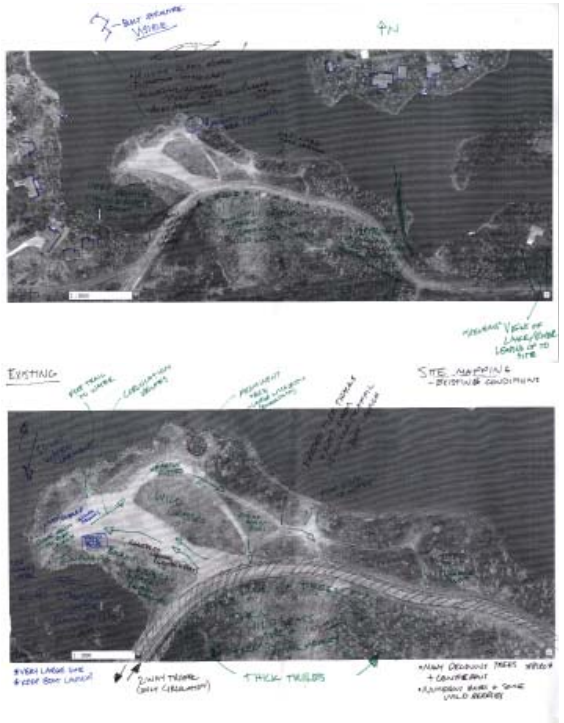
In the midst of the 1900's, places of fitness were established by local and immigrating men seeking an outlet of physical activity in response to the sedentary desk jobs that many were accustomed to after the rise of the industrial revolution. Over time, many improvements were made to the facilities like mogols such as Vic Tanny and Joe Gold, the well-known creator of Gold's gym. But now as a reflection of shifting cultural perceptions, the 20th century turned fitness into a business industry, host to many fads and promises of getting fit fast.

SITE ANALYSIS



EXISTING SITE

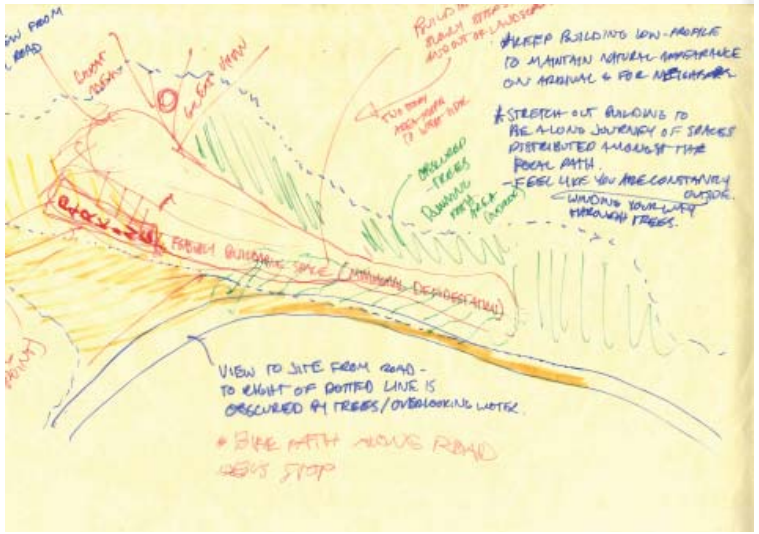
Leaving the site in the most fertile state is incredibly important to the natural surroundings of this secluded facility. Making use of as much current vegetation as possible, along with reusing the beaten-down trails previous human-activity on site is important in perpetuating this natural notion.

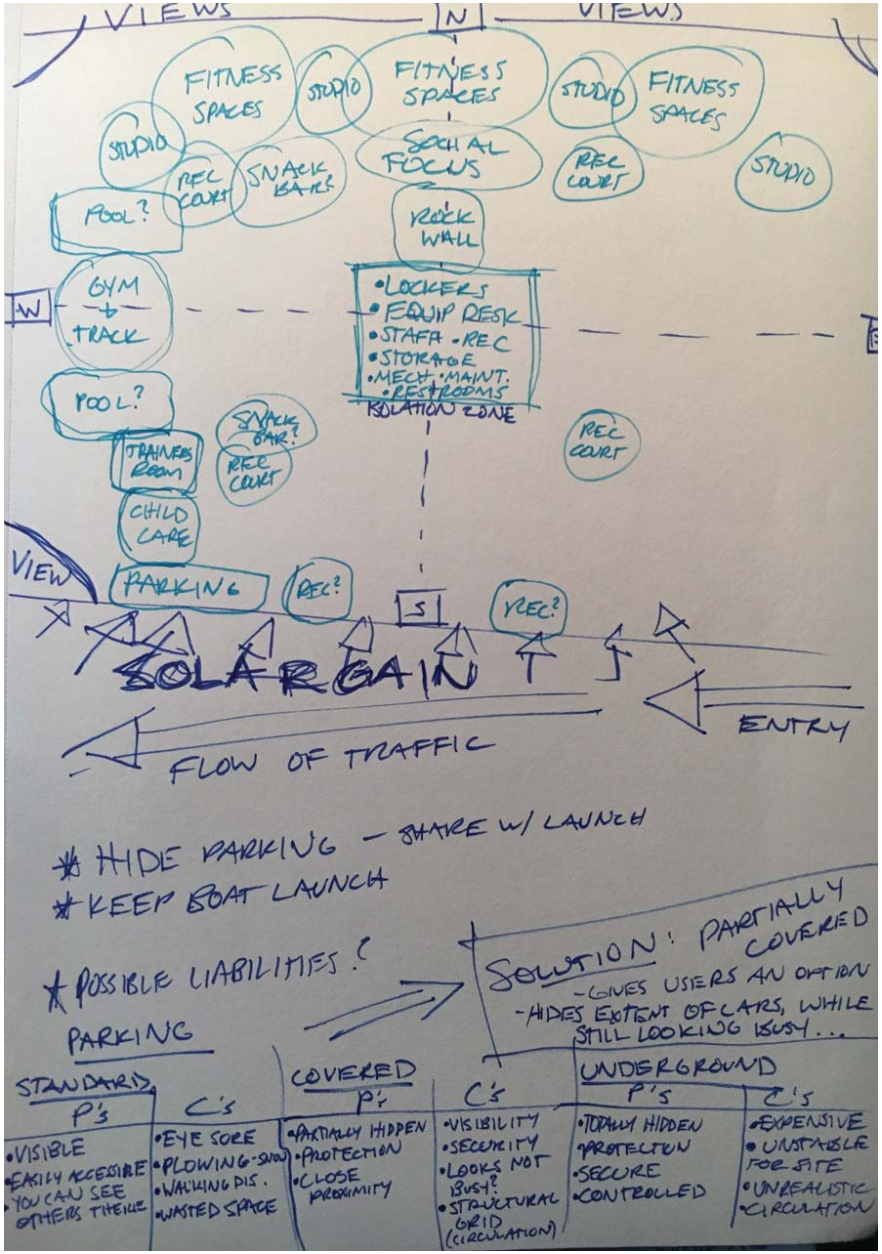


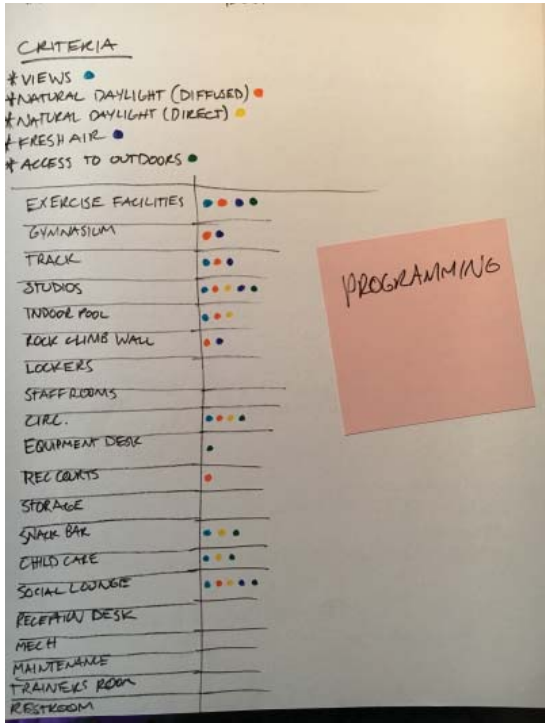
VIEWS

Perhaps the most prevalent element of design noticeable in my project is the constant use of framing great views using the openings of architecture. The dynamic track experience takes its angular formation by meandering the user through a progression of implied views using various angles, also inspired by the cracked path or journey.

Specific zones - or hot spots - were noted, and recieved a great amount of focus in the design. These areas offer plentiful views to the exterior in almost every direction.







PROGRAMMATIC RESPONSE TO SITE ANALYSIS

The general location, orientation, and proximity of the spaces in relation to one another are deeply connected in what the site has to offer. Some of the main criteria in identifying makeup and organization of these pieces in relation to the surroundings involves access to: views, natural daylight (both direct and diffused), fresh air, and direct access to the outdoors. Views were most important in establishing the openings and facades associated with the project, as the meandering cracked paths offer a constant, dynamic visual experience that paints a panoramic image of the exterior, through the glazing and permutations of the walls.

JUSTIFICATION

PERSONAL

In my opinion, there is nothing greater than creating something completely self-guided and focused on site, typology, and premise of my own choosing. Physical activity has always been an important part of my life, but its diminishing existence in the world around us inspired me to seek a solution to the current problem, which I hope to shed light on with this project.

PROFESSIONAL

Recreating the way we think about social and physical constructs being influenced by architectural responses begins to challenge the current standards that perhaps need rethinking. Addressing the validity of architectural decisions regarding function and form is important to the design field as a way of keeping the profession poised and polished on its practices.

ACADEMIC

Educationally speaking, a Master's student must exhibit the ability to take what is already known in the overall body of knowledge, and build upon it in ways that have not yet been explored, or to a new level that has not yet been reached. This project takes into account every aspect of architectural design learned throughout my education here at NDSU, as well as my own personal experiences within the profession. With the addition of strenuos research, experimentation, and analyzation, I intend this project to expand the horizons on which the interior and exterior form and function enhance our social constructs and promote activity and movement through the use of archtectural solutions.

SPACE ALLOCATION

FUNCTION	CAPACITY	NO. OF UNITS	AREA/ UNIT	NET AREA	NET AREA SUBTOTAL
EXERCISE SPACES					
CARDIOVASCULAR	30	3	600	1,500	
FREE WEIGHTS	15	3	600	1,500	
SELECT WEIGHTS	10	3	330	1,000	
CORE	5	3	175	500	
FLEXIBILITY	5	3	175	500	
STUDIOS	15	3	600	1,500	
					6,500
REC SPACES					
GYMNASIUM	200	1		5,000	
INDOOR TRACK	30	1		1,500	
ROCK WALL	15	1		750	
REC COURTS	4	2	500	1,000	
INDOOR POOL	20	1		1,000	
HOT TUB	10	1		250	
SAUNA	10	1		250	
					9,750
SUPPORT SPACES					
RECEPTION DESK	4	1		250	
EQUIPMENT DESK	4	1		750	
CHILDCARE	12	1		1,000	
SNACK BAR	8	1		750	
LOCKERS	50	2	1,000	2,000	
SOCIAL LOUNGE	25	1		1,000	
TRAINER'S ROOM	8	1		750	
					6,500
MAINTENANCE					
STAFF ROOMS	12	3	500	1,500	
RESTROOMS	10	4	500	2,000	
STORAGE	5	5	400	2,000	
RECEIVING	15	1		500	
MECHANICAL	10	2	1,250	2,500	
CIRCULATION				7,500	
					16,000
			TOTAL SQUARE FEET:		38,750

FUNCTION	GROSS BUILDING AREA	FLOORS	BUILDING FOOTPRINT	LAND AREA
BUILDINGS				
FITNESS CENTER	38,750	2	20,000	30,000
SPORTS SHED	1,500	1	1,500	2,000
				32,000
SITE FACILITIES				
WORKOUT SPACES			2,000	2,500
VOLLEYBALL COURT			1,200	2,000
CARDIO TRAIL			2,500	2,500
GREEN SPACE			1,500	1,500
PARKING			3,000	3,000
				11,500

TOTAL LAND USE:	43,500
TOTAL LAND ON SITE:	90,000

Occupancy Classification		Allowable Floor Area	Stories	Height
A-3	**Assembly : Group A** Gymnasium, Indoor Swimming Pool, Rock Wall, Workout Areas, Outdoor Gathering Spaces	15,500	3	65'
B	**Business : Group B** Clinic - Outpatient, Personal Trainer, Cafe	37,500	5	
E	**Educational : Group E** Wellness Education Classrooms, Daycare	26,500	3	

Sprinkler System

Implementing an automatic sprinkler system throughout the building would allow for an increase of:
Allowable Area x 200% **Stories + 1**

Means of Eggress

Exit Access Travel Distance

200ft (without Sprinkler System)
250ft (with Sprinkler System)

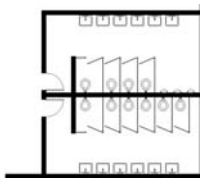
Minimum Eggress Width

80"

Plumbing Requirements

The main restrooms servicing the main lobby and workout area would include:

Womens: 6 water closets (1 ADA stall) and 6 lavatories.
Mens: 4 water closets (1 ADA stall), 3 urinals, and 6 lavatories.

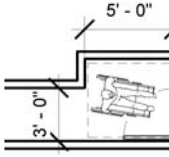


Construction

Type I

Noncombustible Buildin
1-Hour Rating

ADA



Accessible Doorway and

Providing
equipmen
allow the
utilized by
individual

FITNESS CLUBS ENCOMPASS A WIDE RANGE OF EQUIPMENT AND SPACES THAT ARE CONSTANTLY CHANGING AS THE POPULARITY OF THESE EXERCISE TOOLS AND TECHNIQUES TRANSITION OVER TIME. THIS PROGRAMMATIC UNCERTAINTY PROVIDES SPACIAL CHALLENGES THAT MUST BE ADRESSED IN THE PLANNING OF THIS DESIGN.

CREATING AN OPEN FLOORPLAN WITH DIFFERENT ZONES THAT CAN WELCOME ACTIVITY OF VARIOUS SIZES WILL ALLOW THE BUILDING TO ADAPT TO THE CURRENT DEMAND AND DIRECTION OF THE MARKET.

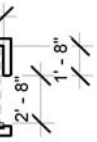
THE SPACES ARE DIVIDED INTO FOUR CATEGORIES DEPICTING THEIR INVOLVEMENT IN THE FACILITY: EXERCISE, RECREATION, SUPPORT, AND MAINTENANCE.

LOOKING AT THE LOGISTICS OF SITE-SPECIFIC CODE REQUIREMENTS FOR THIS PROJECT, IT IS IMPORTNANT TO VIEW THESE AS GUIDELINES THAT CAN BE WORKED AROUND, RATHER THAN RULES IMPEDING THE FREEDOM OF DESIGN. THE CHOSEN CONSTRUCTION TYPE ALLOWS FOR AN ARRAY OF MATERIAL POSSIBILITIES TO ENHANCE THE AESTHETIC AND FEEL OF THE FACILITY. ACCESSIBILITY IS HIGHLY IMPORTANT FOR A PUBLIC BUILDING OF THIS KIND, AS PEOPLE OF ALL AGES AND ABILITY LEVELS MUST BE ACCOMODATED WITH ACCESSIBLE SPACES, AMENITIES, AND EQUIPMENT. THE VARIOUS AREAS OF OCCUPANCY PROVIDE THE USERS WITH A VARIETY OF SPACES RANGING IN AMOUNT OF ALLOWABLE FLOOR AREA, AND ACCOMPANIED STORIES.

Type

I : B

g Elements



d Approach

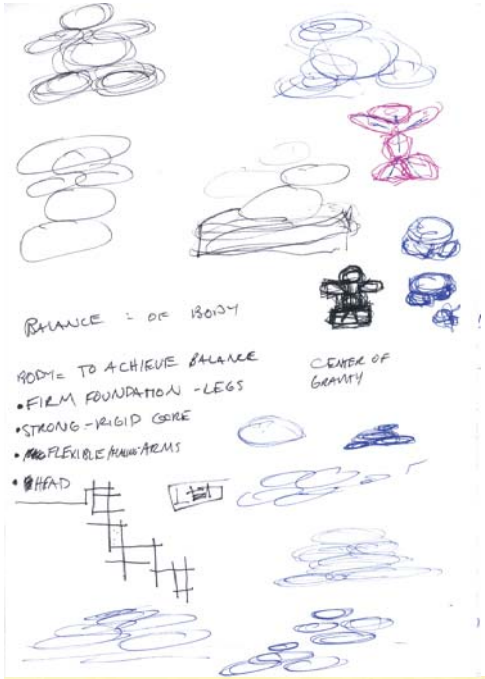
accessible workout
t and ammenities will
whole facility to be
each and every
in the community.

CODE ANALYSIS

SPACE MATRIX

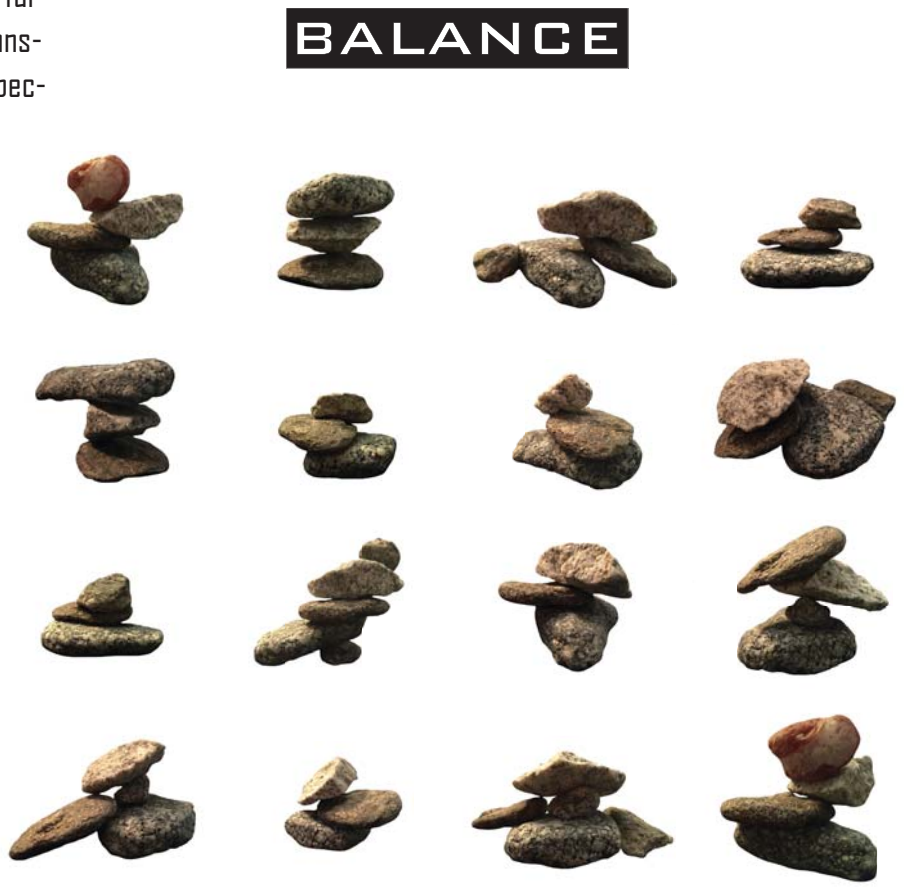
	EXERCISE FACILITIES	GYMNASIUM	TRACK	STUDIOS	INDOOR POOL	ROCK CLIMBING WALL	LOCKERS	STAFF ROOMS	CIRCULATION	EQUIPMENT DESK	REC COURTS	STORAGE	SNACK BAR	CHILD CARE	SOCIAL LOUNGE	RECEPTION DESK	MECHANICAL	MAINTENANCE	TRAINER'S ROOM	RESTROOMS
EXERCISE FACILITIES	■			○		○	●	○	●	○		●						○		●
GYMNASIUM		■	●				○			○		●	○					○		●
TRACK		●	■		○	○	○		○											●
STUDIOS	○			■			○		○	○		○						○		●
INDOOR POOL			○		■		●	○		●		●	○	○	○		●	●	○	●
ROCK CLIMBING WALL	○		○			■	○	○	○	●		○			○			○		●
LOCKERS	●	○	○	○	●	○	■	○	●	○	○							○		●
STAFF ROOMS	○				○	○	○	■	○	○						○		○		●
CIRCULATION	●		○	○		○	●	○	■	●	○		●		●	●		○	○	●
EQUIPMENT DESK	○	○		○	●	●	○	○	●	■	○	●				○				○
REC COURTS							○		○	○	■	○			○					●
STORAGE	●	●		○	●	○				●	○	■	○						○	
SNACK BAR		○			○				●			○	■		●	○	○	○		●
CHILD CARE					○									■	○	●		○		●
SOCIAL LOUNGE					○	○			●		○		●	○	■	○				●
RECEPTION DESK								○	●	○			○	●	○	■				○
MECHANICAL					●								○				■		○	
MAINTENANCE	○	○		○	●	○	○	○	○				○	○				■		●
TRAINER'S ROOM					○				●			○					○		■	○
RESTROOMS	●	●	●	●	●	●	●	●	●	○	●		●	●	●	○		●	○	■

● CLOSE PROXIMITY ○ SOME PROXIMITY □ UNECESSARY



INSPIRATION

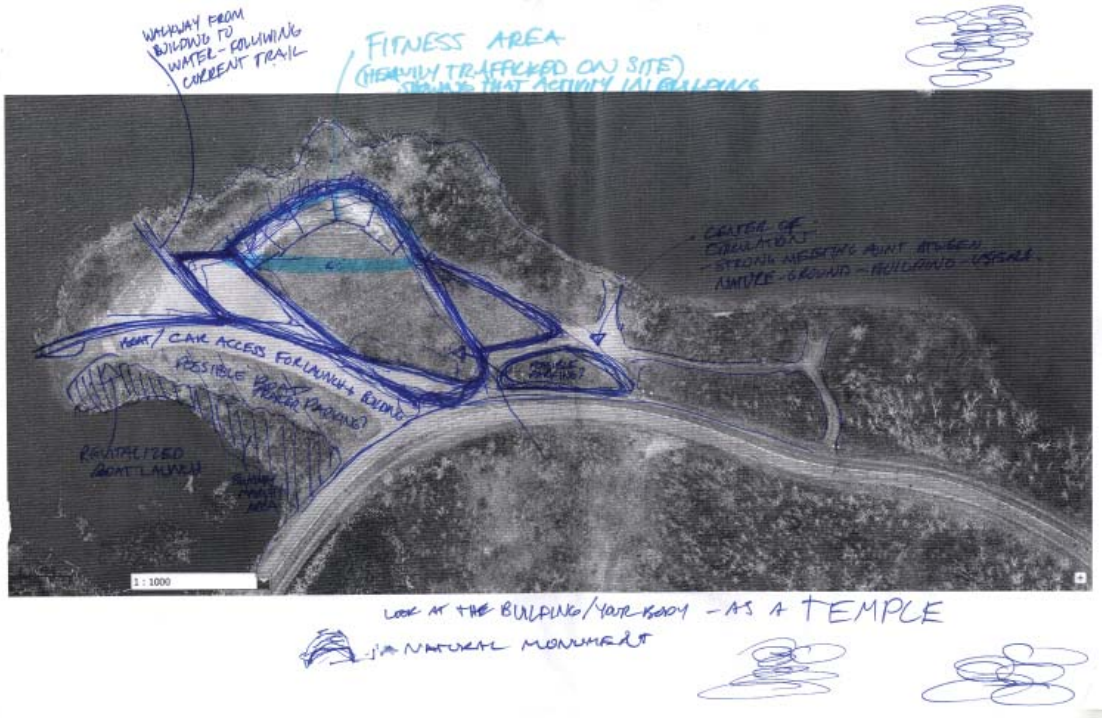
The key to being physically fit is all about finding and staying at a point of balance. Everyone achieves this point of homeostasis through a different journey or path of decisions and experiences. The idea of perceiving a stack of rocks in balance is symbollically powerful through the realization of its ability to transfrom its compostion, based on your perspective, yet still remain in balance.

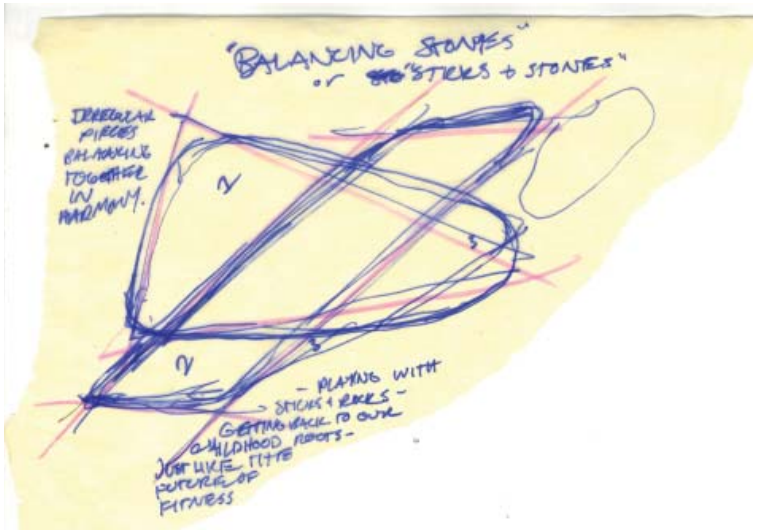


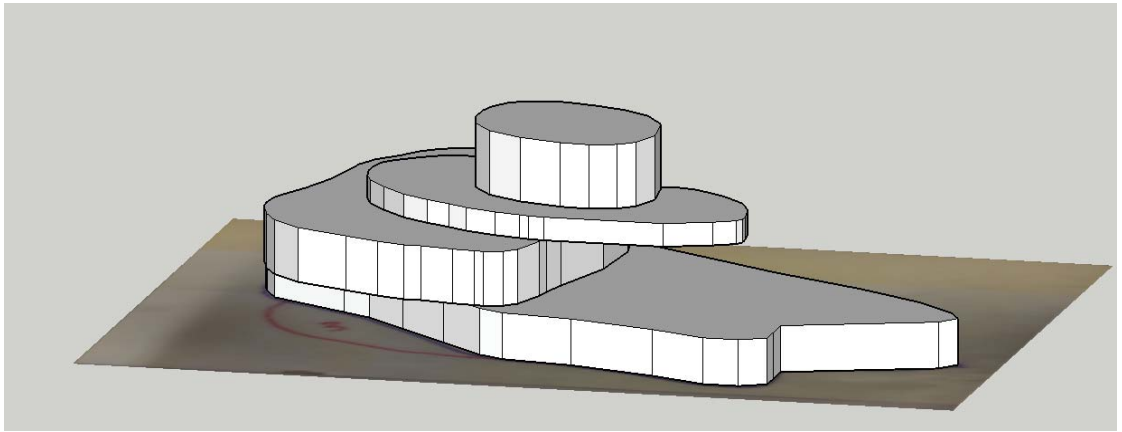
FORMAL EXPERIMENTATION

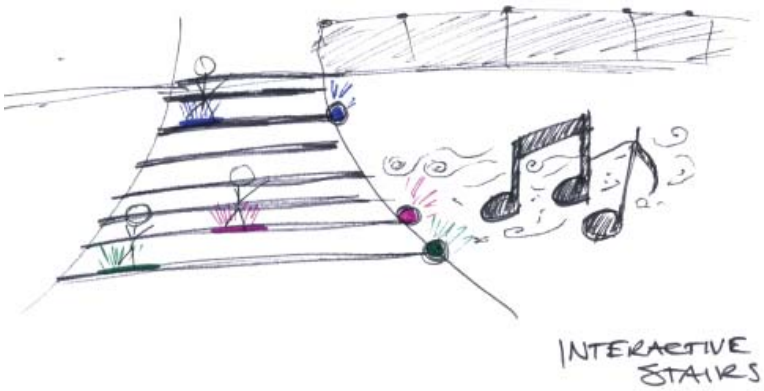
Using this idea of varying stacked forms, I explored the implementation of the inspiration onto the site.

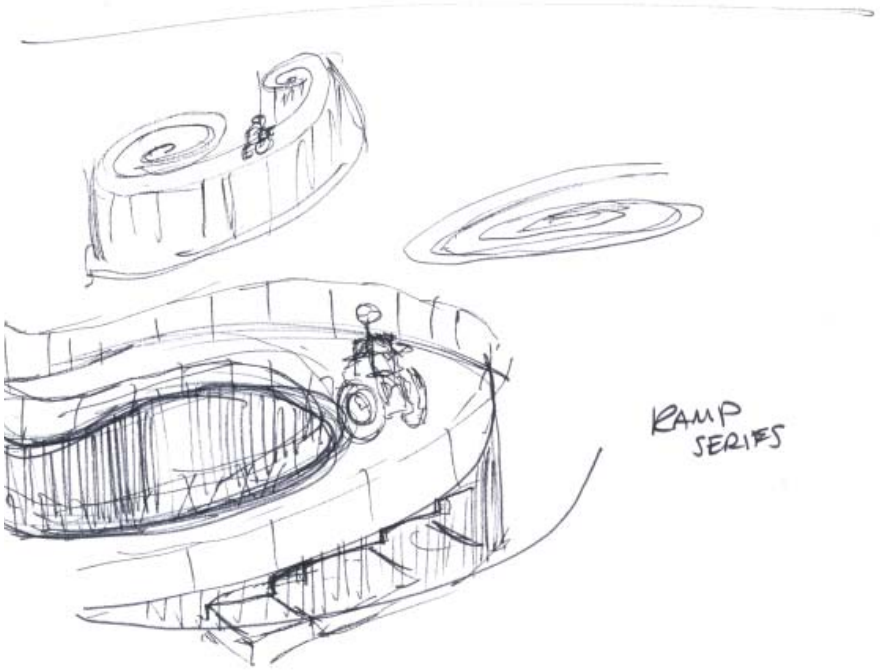
Although the concept was strong, I still felt that I needed more to focus my design around rather than just the abstract idea of irregular forms situated at a point of equilibirum.

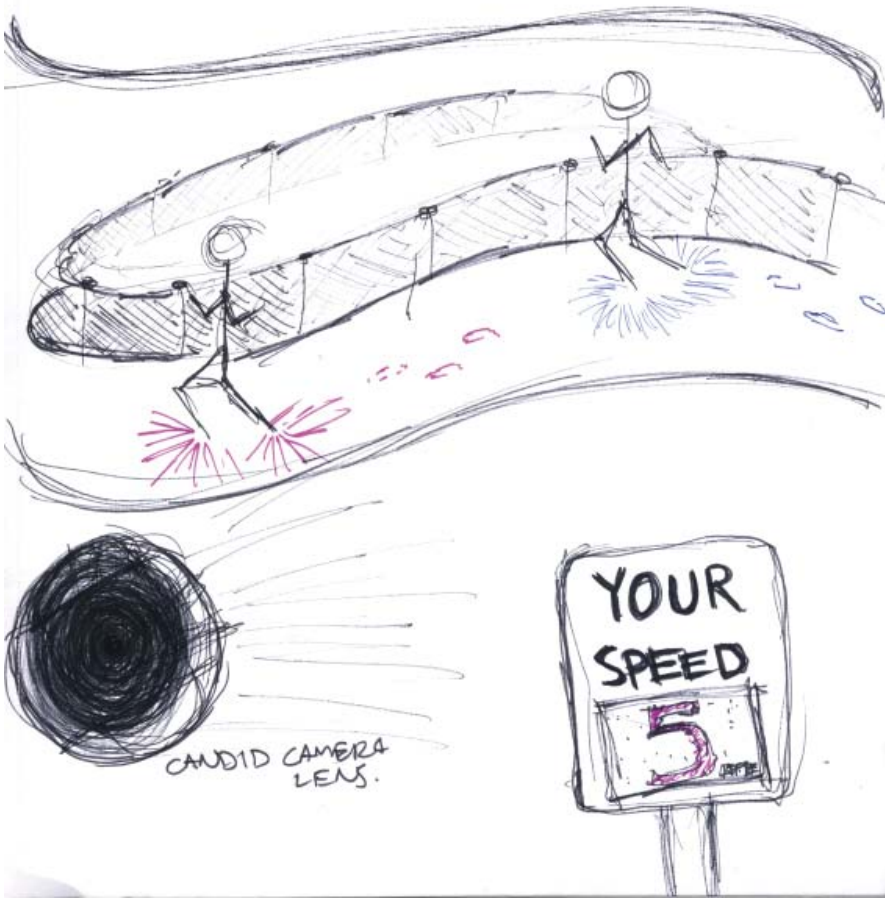








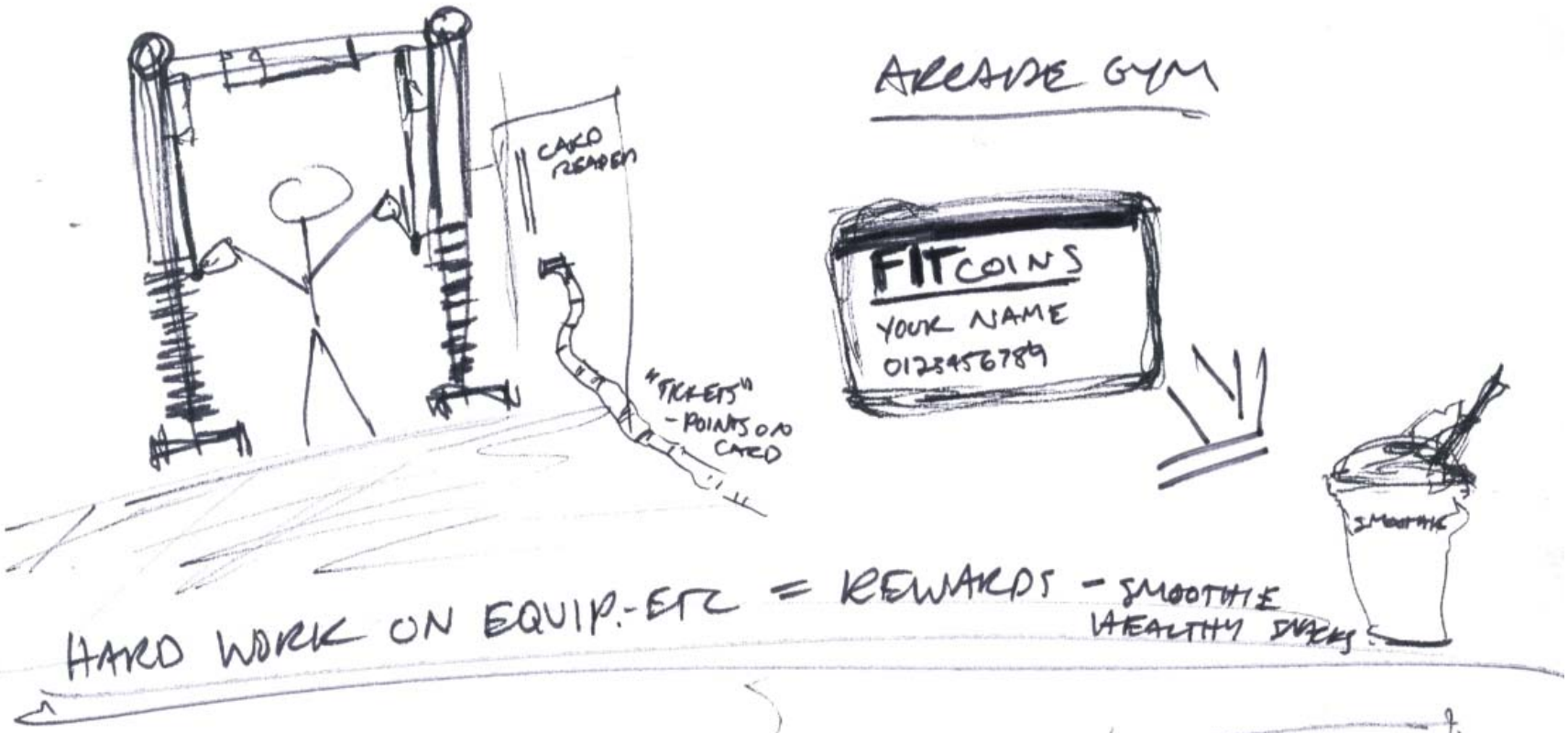




As a way of approaching the problem from a different perspective, I tried to put my own spin on some architectural elements found in fitness clubs in hopes of inspiring their use through fun engagement. Utilizing each and every sense the human body has at its disposal provided a springboard for numerous ideas of varying effects. While these strategies may not have been carried through my project, they are importnant to its development and the ideals behind such.

FUN THEORY

DESIGN THINKING


ARCADE GYM
CARD READER
"TICKETS" - POINTS ON CARD
FITCOINS
YOUR NAME
0123456789
SMOOTHIE
HARD WORK ON EQUIP.-ETC = REWARDS - SMOOTHIE
HEALTHY SNACKS

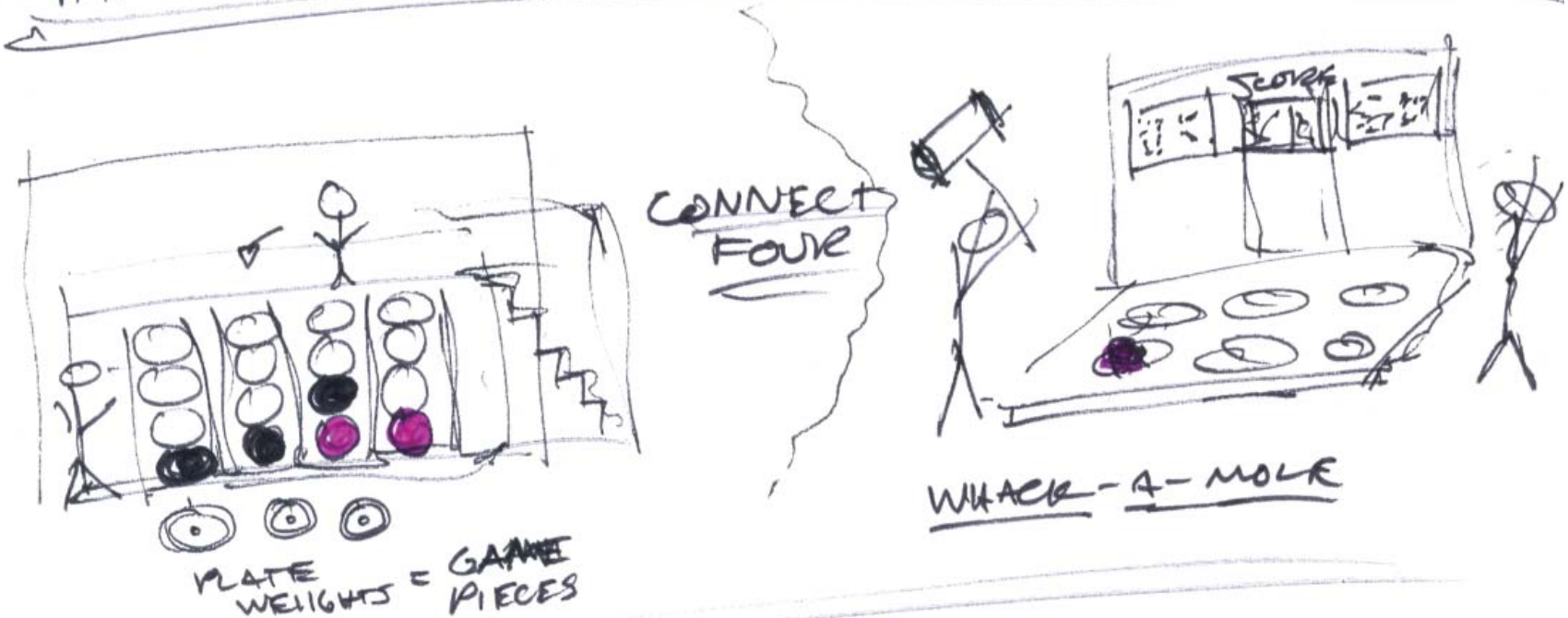
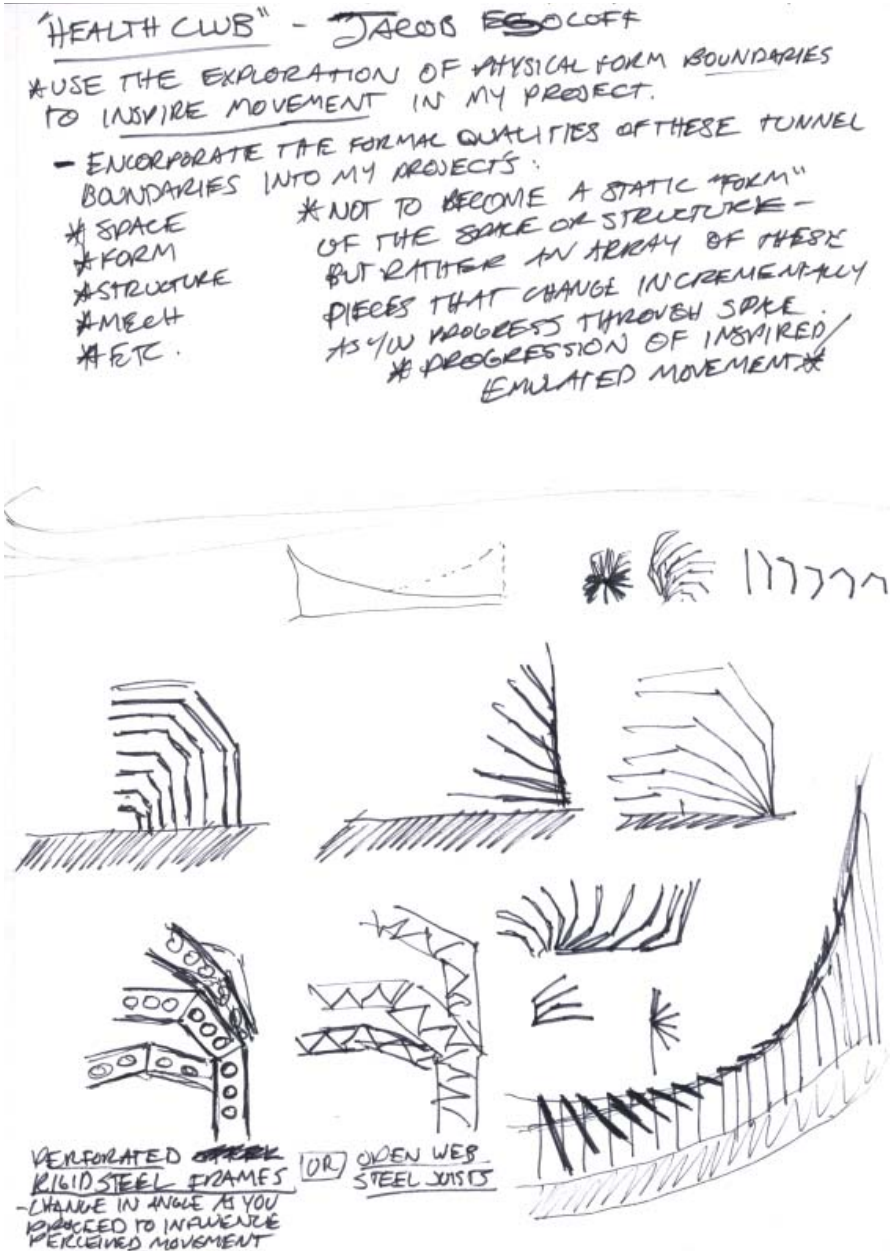
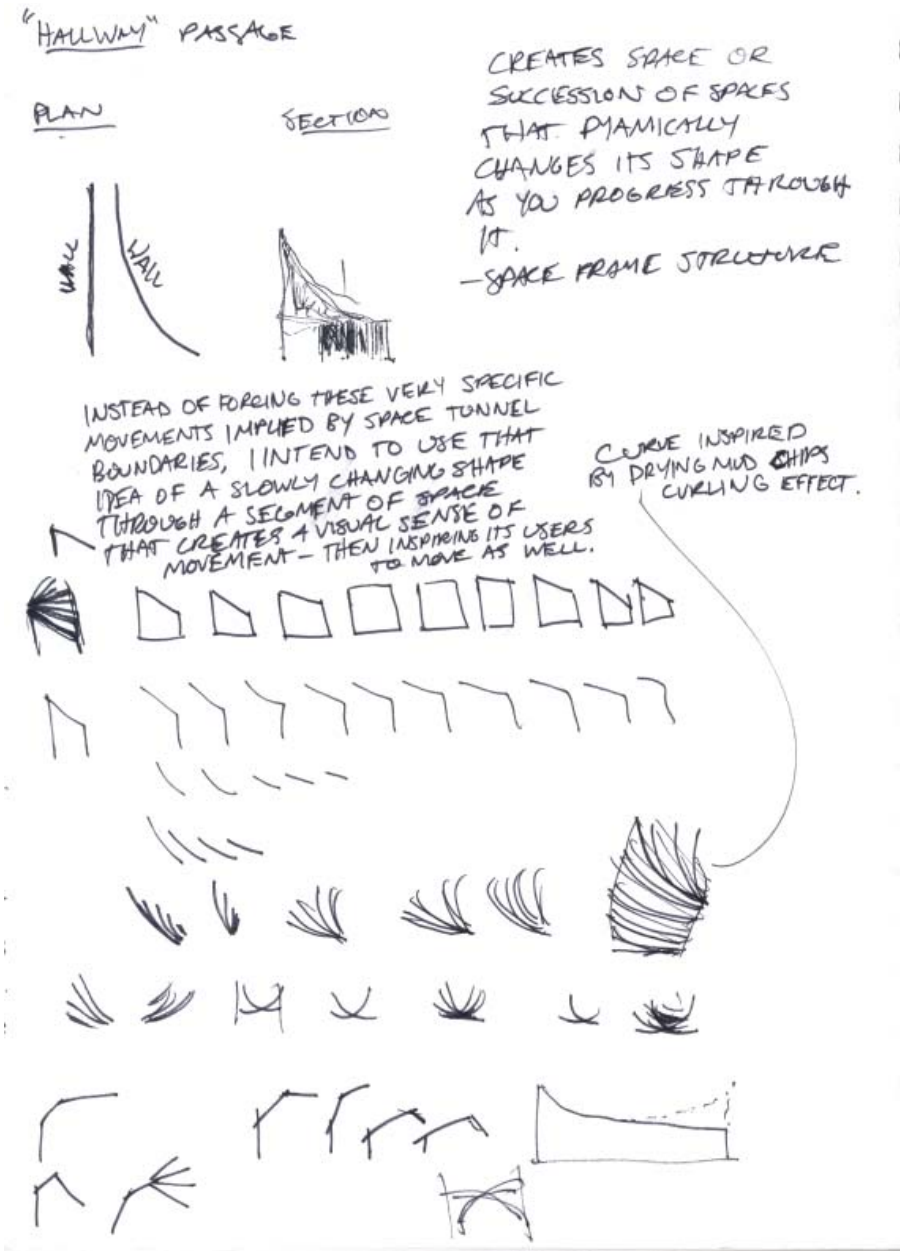


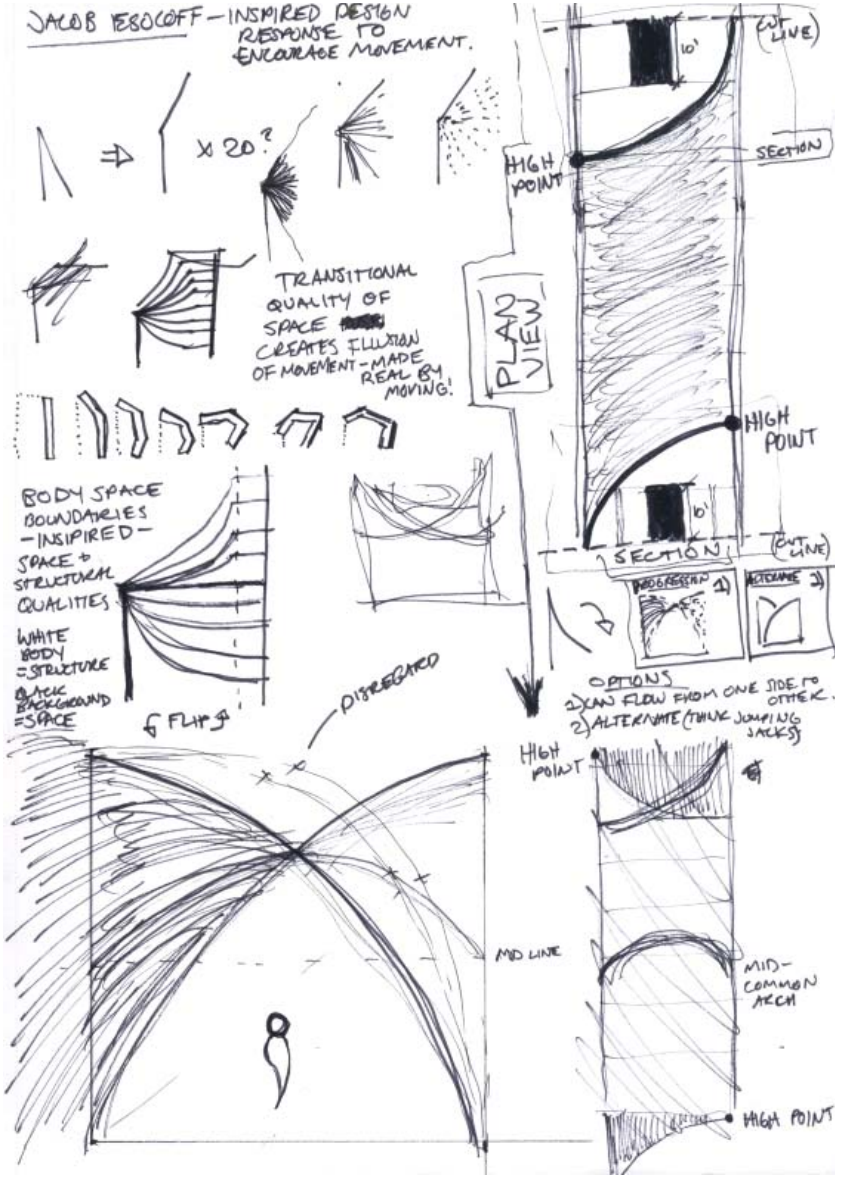
PLATE WEIGHTS = GAME PIECES
CONNECT FOUR
SCORE
WHACK-A-MOLE



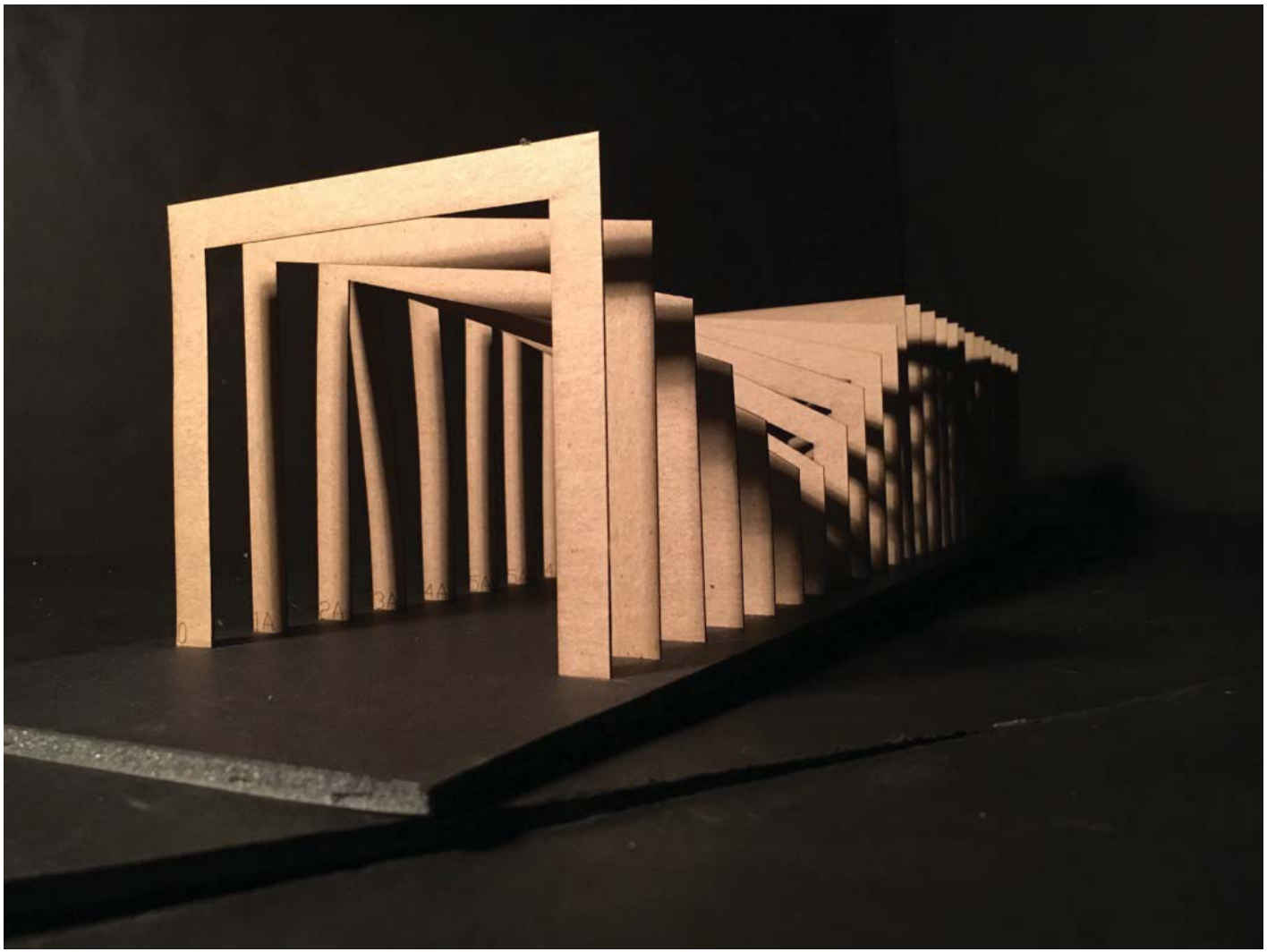


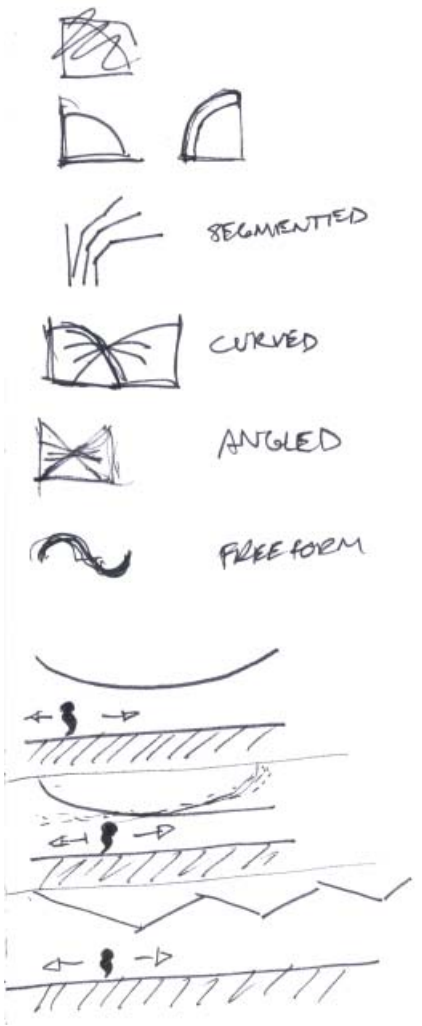
MOVEMENT MODEL

DESIGN THINKING



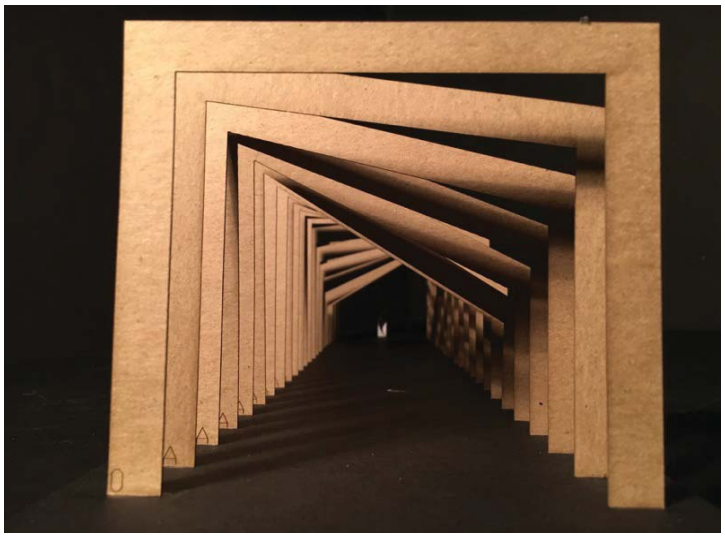
Inspired by the gestures explored in Esocoff's wor, the idea of using architectural frames to provoke movement would be a unique way to break up the monotony present in typical fitness clubs. The tunnel-like effect has the potential to create dynamic visual experiences while static or in-motion, mimicing the effect of progressing through a forest environment.





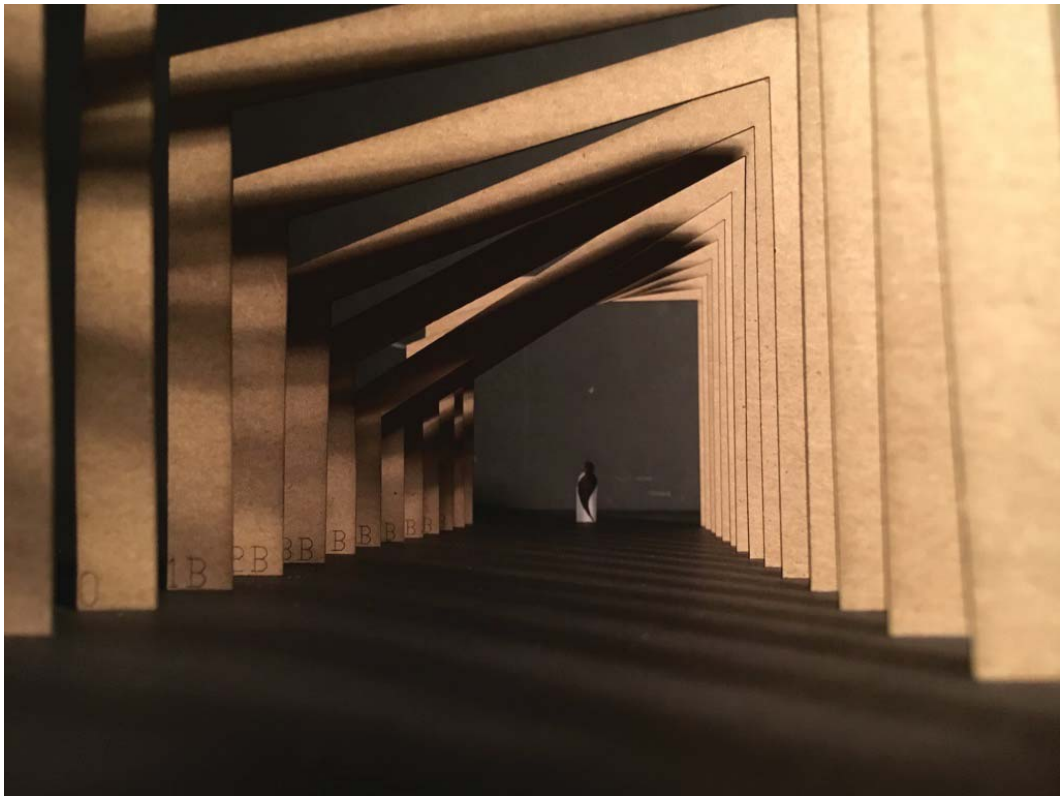
MOVEMENT MODEL

DESIGN THINKING



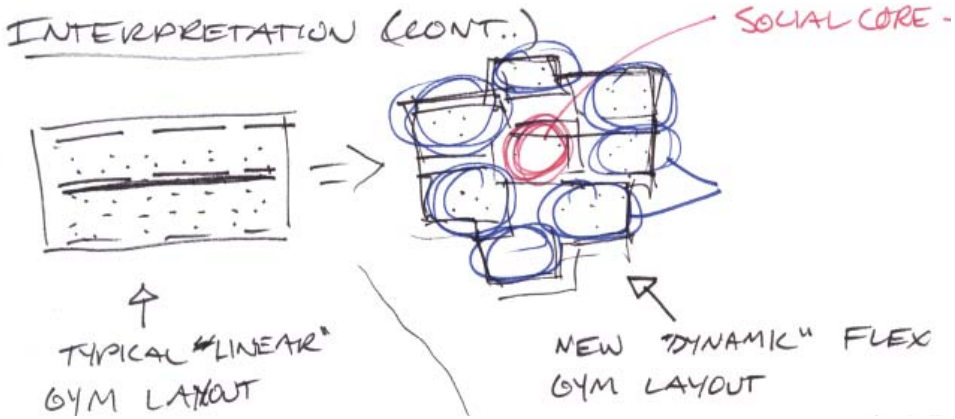
The angular form was chosen after coinciding with the design intent inspired by the cracking mud found on-site. Interestingly enough, the progression of angles takes on a curved profile when arrayed and viewed from the interior or exterior perspective. This balance of curved gestures within the rigid form mimics what we see in nature.

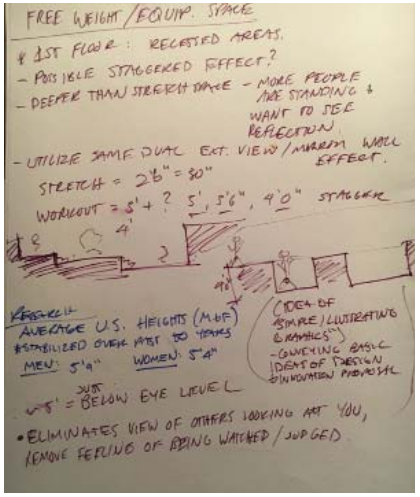
Light plays a critical role in enhancing the ability of simple architectural forms to inspire movement. As the light (or sun) moves throughout the day, so do the shadows cast, constantly changing the way the space is perceived. The repitition creates a strong allure, inviting exploration, along with the required effort to move through it.

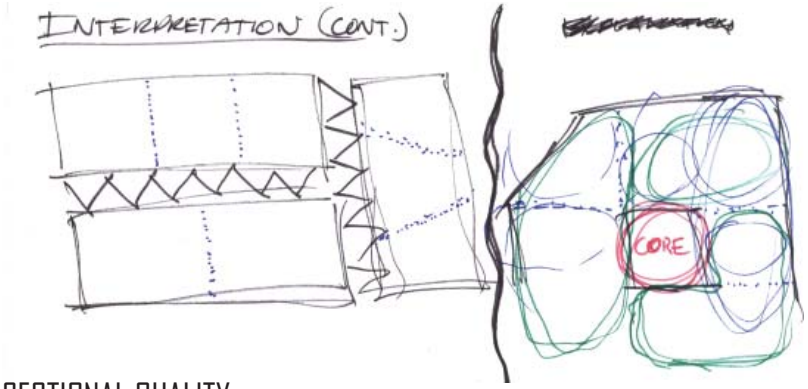


SPACIAL ORGANIZATION

The typical arrangement of fitness spaces can lead to a mundane and even uncomfortable experience. Being tightly enclosed in a space with rows of bulky equipment can be vastly overwhelming to the user. Breaking up the space into separate areas would allow for a more dynamic experience with an increased sense of space and privacy.

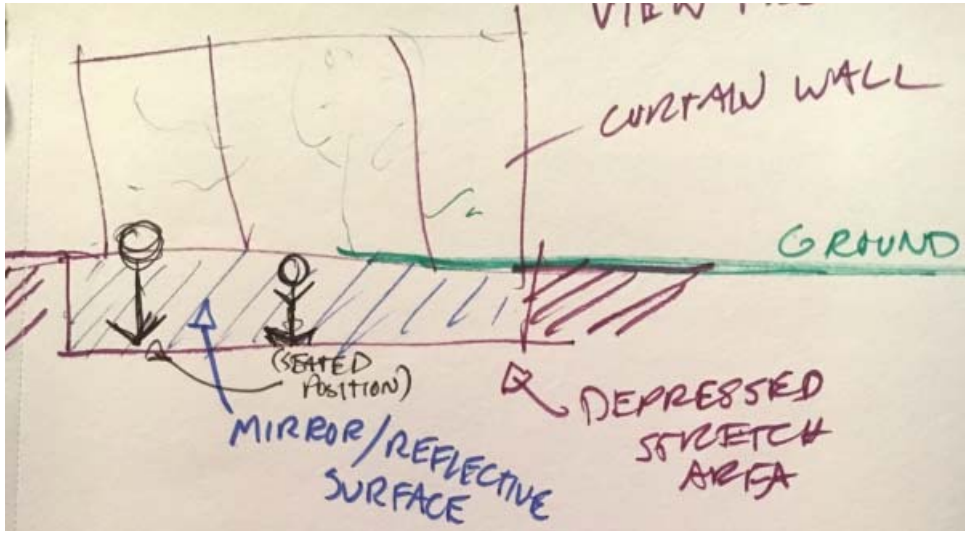


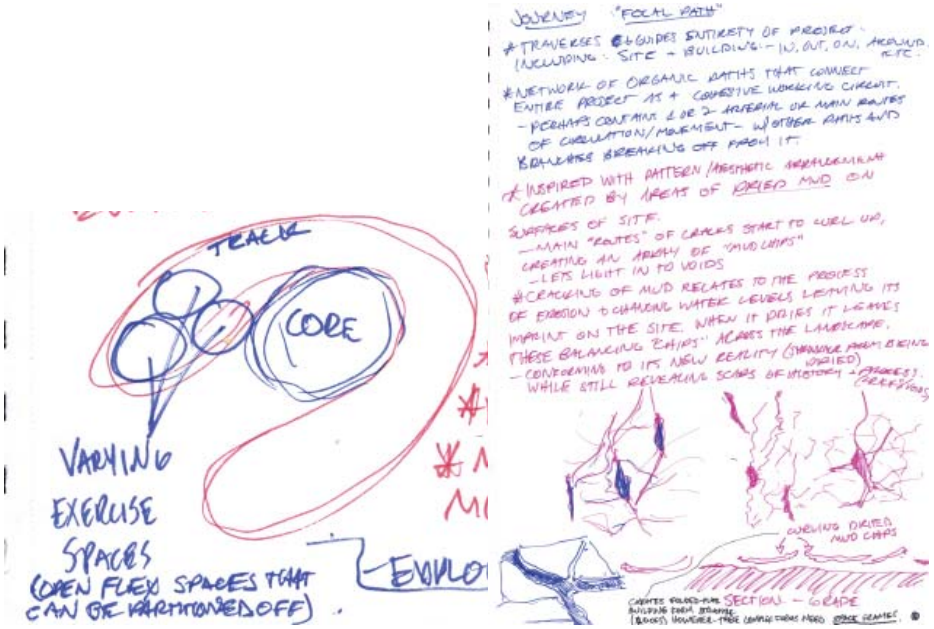


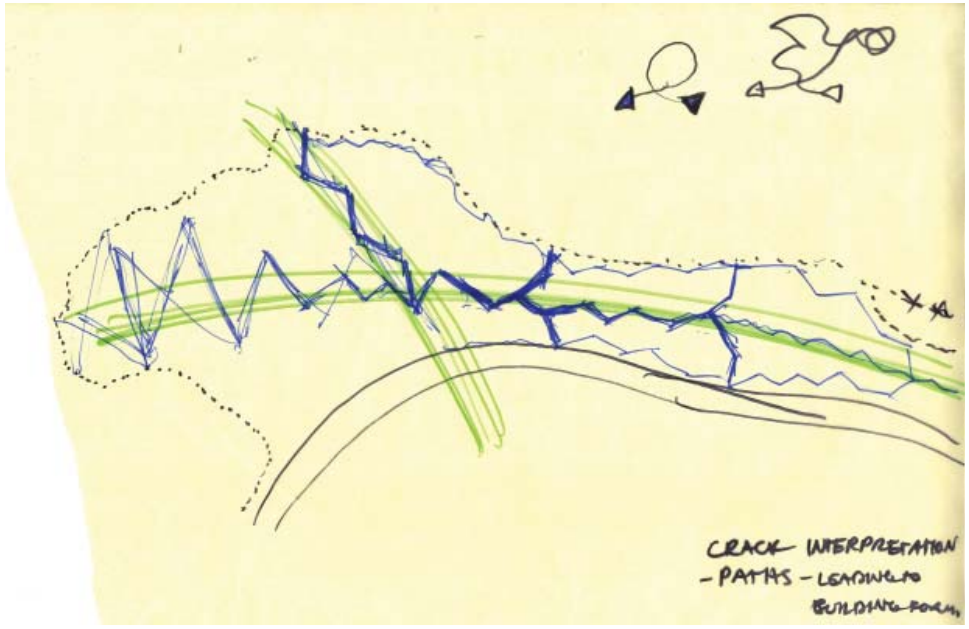


SECTIONAL QUALITY

Manipulating fitness spaces vertically can help break the monotony of the indoor environment, and allow an increased sense of privacy when in the space.



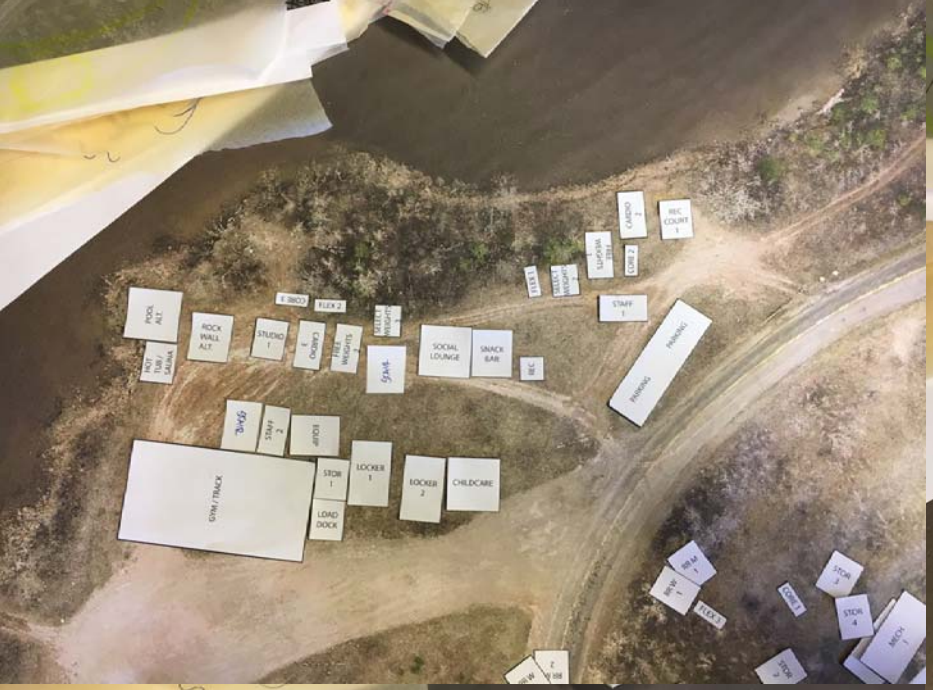


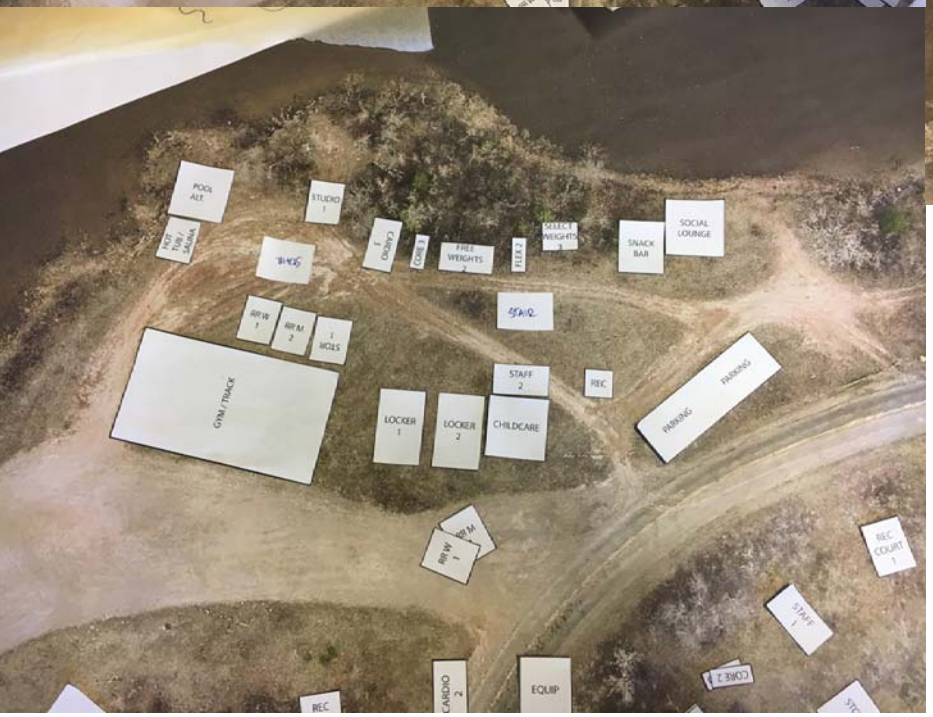


Circulation

Thinking about the circulation of a building as an opportunity for physcial activity and movement, rather than just a means of travel is the main focus of this design. Being that humans are especially known for being a bipedal species, it would only make sense that we focus on the use of our legs as a primary form of movement for physical fitness.

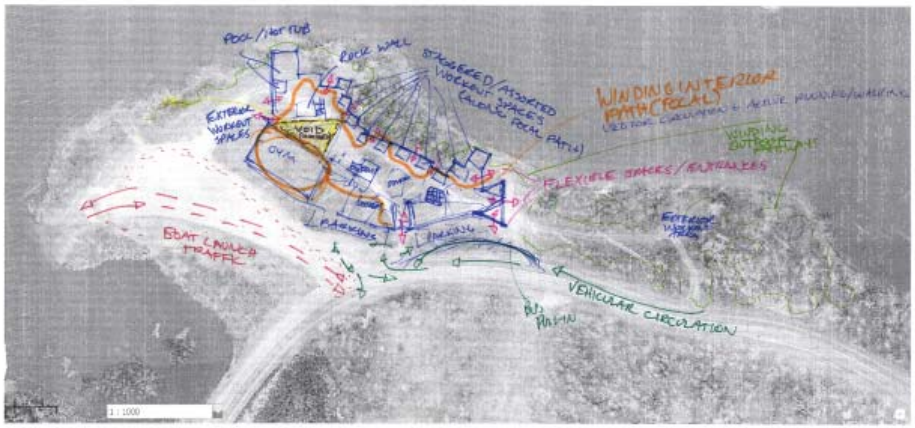
Taking the typical arrangement of an oval shaped track and instilling cues from nature can make the spaces for circulation a journey of meandering through the building, rather than a never-ending loop. The aim is to simulate these dynamic outdoor environments in a controlled architectural setting that inspires activity in the same way nature does.



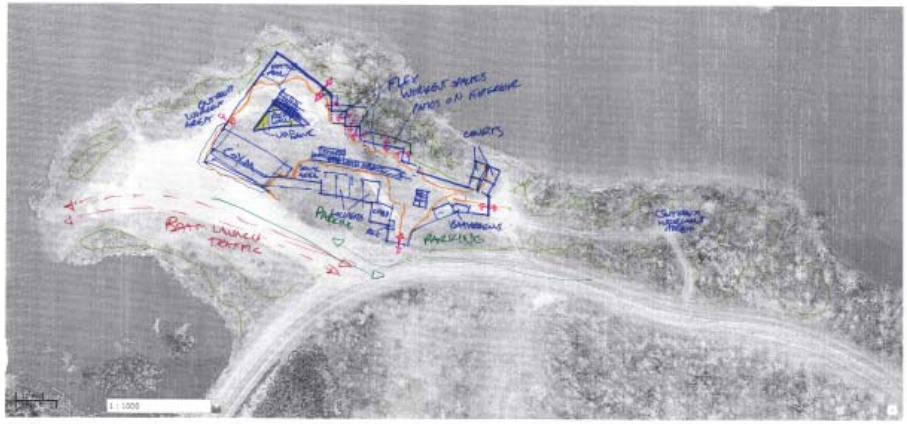


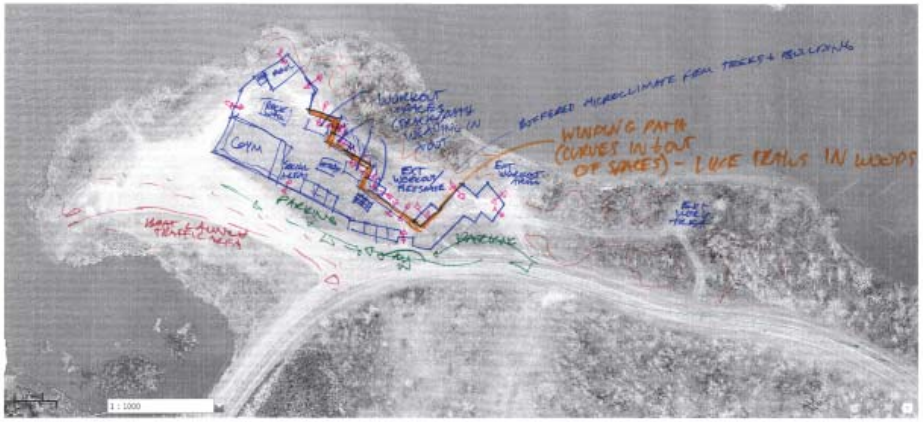
FORMAL ITERATION STUDIES

Throughout the process, program elements were changed and defined and experimented with in different layouts and relationships to other spaces and the site. Various considerations were taken when plaving certain aspects of the building, The main ideas were incorporated into the design thinking, as I took note of things I liked or wanted to breathe through my project, as I came across them in my spacial explorations. The sqaures were broken once a general layout and form was established, then fully freeing the bounds of the plan.


POOL / HOT TUB
ROCK WALL
STAGGERED / ASSORTED WORKOUT SPACES
WINDING INTERIOR PATH
EXTERNAL WORKOUT SPACES
VOID
GYM
FLEXIBLE SPACES / EXTENSIONS
BOAT LAUNCH TRAFFIC
PARKING
VEHICULAR CIRCULATION
BUS BASIN


VOID ABOVE
WORKOUT SPACES ALONG EDGES & INTERIOR SPACES STAGGERED TO CREATE MINIMUM WINDING PATH CIRCULATION
PARKING


FLEX WORKOUT SPACES FACING ON EXTERIOR
COURTS
GYM
PARKING
BOAT LAUNCH TRAFFIC


BUFFERED MICROCLIMATE FROM TREES & BUILDING
WORKOUT SPACES FACING IN & OUT
GYM
WINDING PATH (CURVES IN & OUT OF SPACES) - LIKE TRAILS IN WOODS
PARKING

PRESENTATION

BREAKING THE MOLD

SECTION PERSPECTIVE

SITE

SPACE ALLOCATION

LEVEL 1

LEVEL 2

LEVEL 3

LEVEL 2 - PLAN

ENTRY

RECEPTION

ACTIVE SPACE

LEVEL 3 - PLAN

Design Thinking

Process

Movement Model

THE BREAK

DYLAN SULLIVAN // ARCH 772 // DESIGN THESIS

NORTH DAKOTA STATE UNIVERSITY // BISMARCK // SPRING 2017


DESIGN SOLUTION
10 m
50 ft
1 : 1000

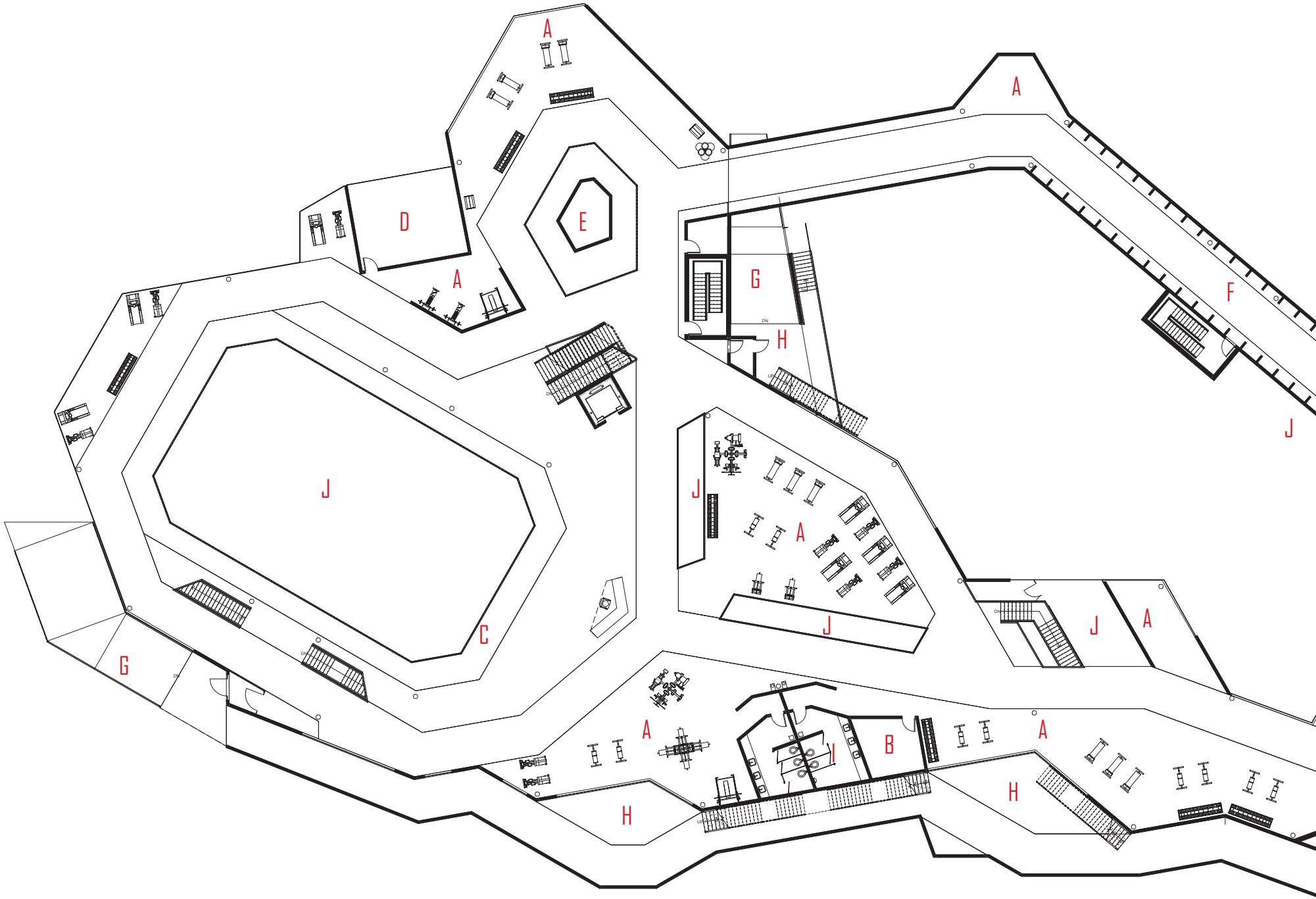
GROUND LEVEL // SITE PLAN

GROUND LEVEL // PLAN

DESIGN SOLUTION

LEVEL 1

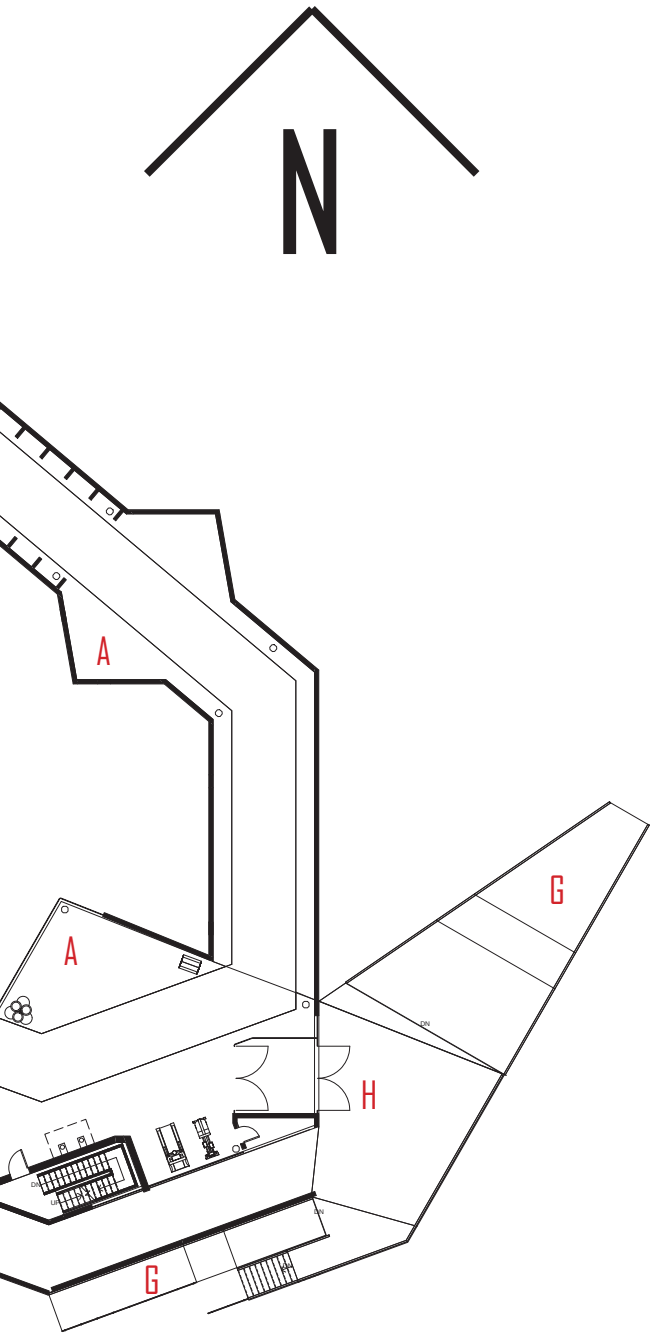
A - Reception
B - Offices
C - Trainer
D - Locker Rooms
E - Flexibilty Area (depressed)
F - Cafe
G - Gymnasium
H - Flex
I - Receiving / Storage
J - Rock Climbing Wall
K - Flex
L - Active Area (depressed)
M - Pool / Hot Tub
N - Consultation Area
O - Childcare
P - Flexible Studio
Q - Flexible Studio
R - Exterior Equipment Storage
S - Open Activity Space
T - Laundry



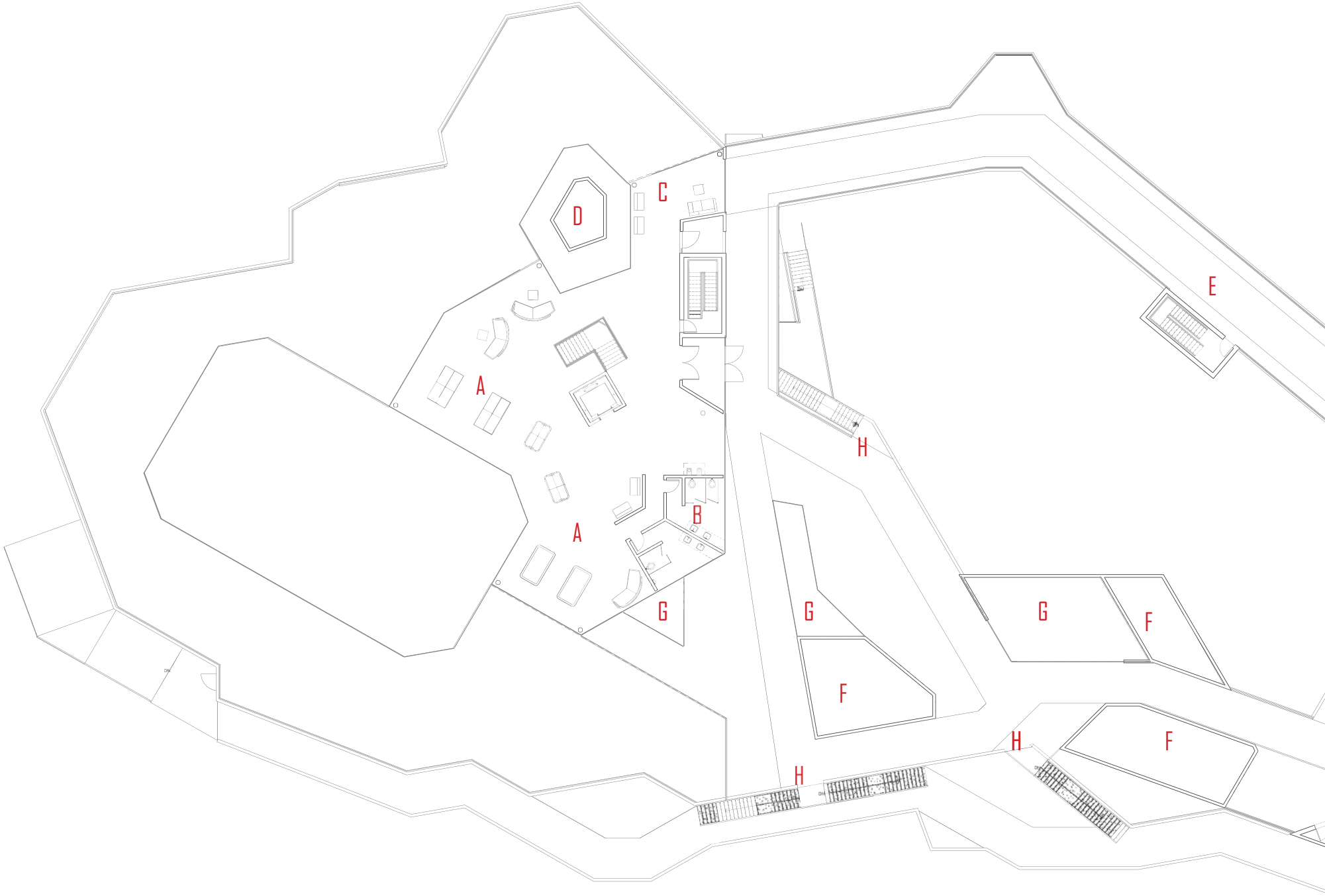
LEVEL 2 // PLAN

DESIGN SOLUTION

LEVEL 2



A - Open Activity Space
B - Maintenance
C - Observation Track
D - Studio
E - Rock Wall
F - Movement Tunnel
G - Exterior Turf Ramp
H - Exterior Patio Space
I - Restroom
J - Void

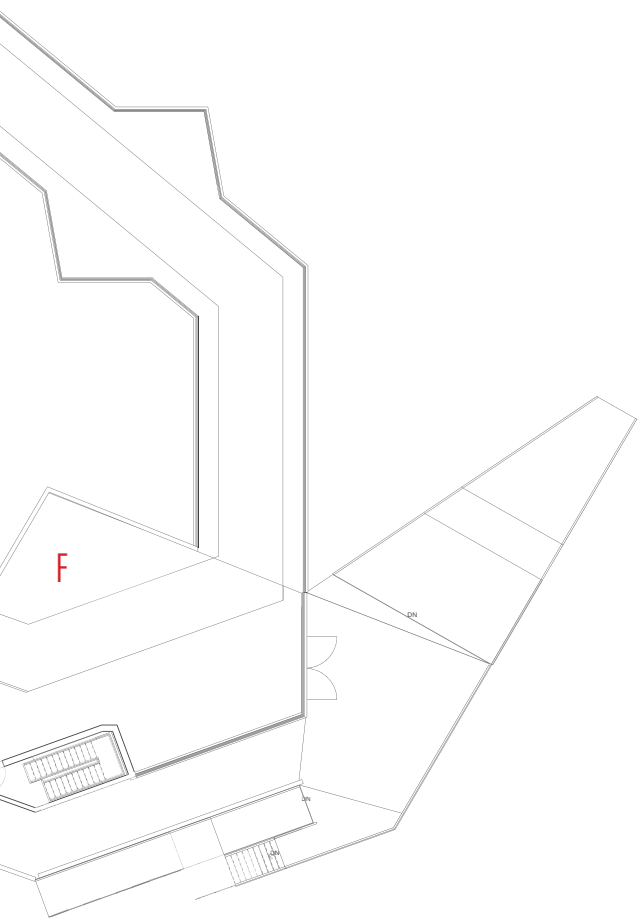


LEVEL 3 // PLAN

DESIGN SOLUTION

LEVEL 3

N



A - Open Activity Space
B - Restrooms
C - Lounge
D - Rock Wall
E - Exterior Greenway
F - Mechanical
G - Void
H - Exterior Circulation

RENDERINGS

ENTRY //

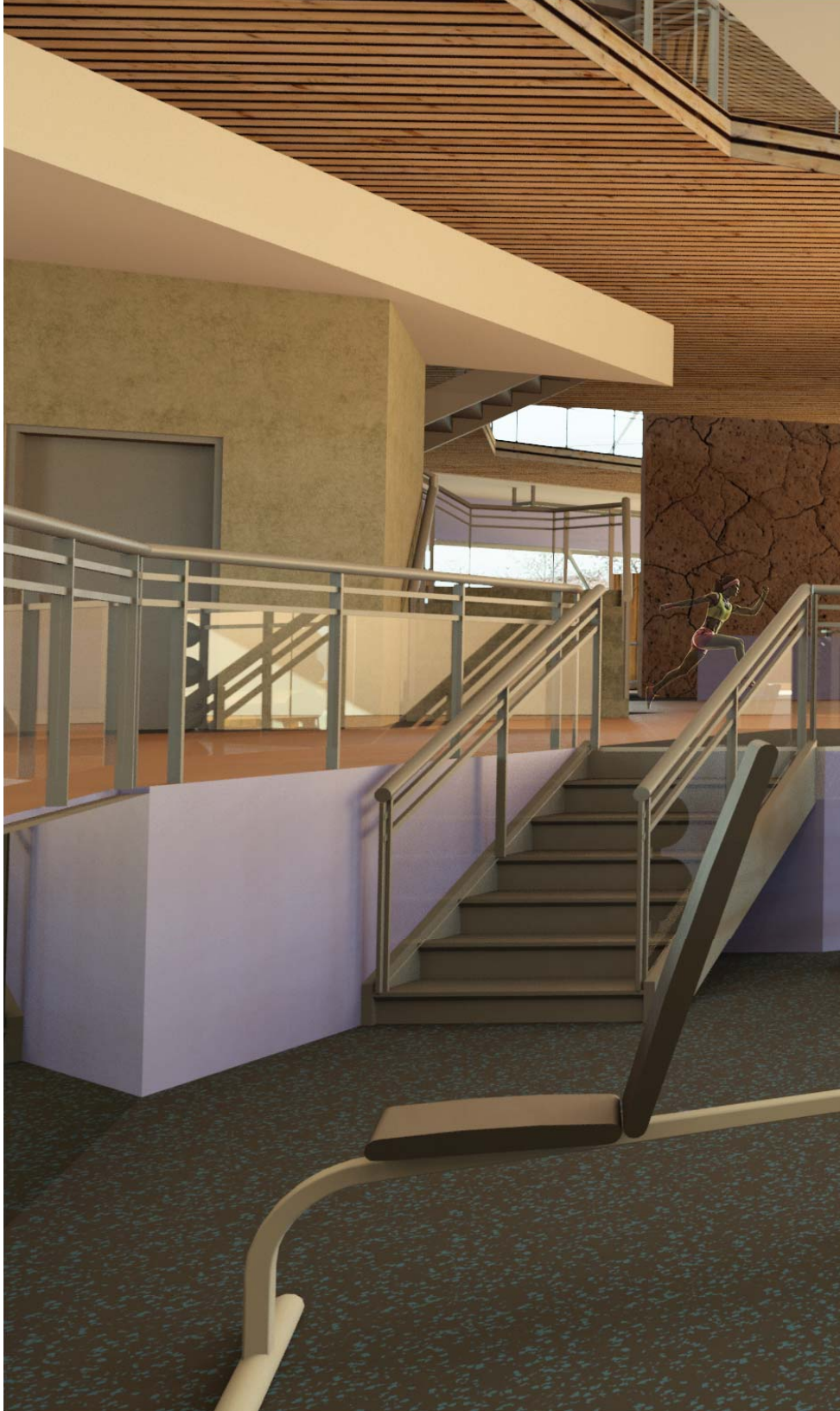
ENTRY //


adidas


adidas

// RECEPTION

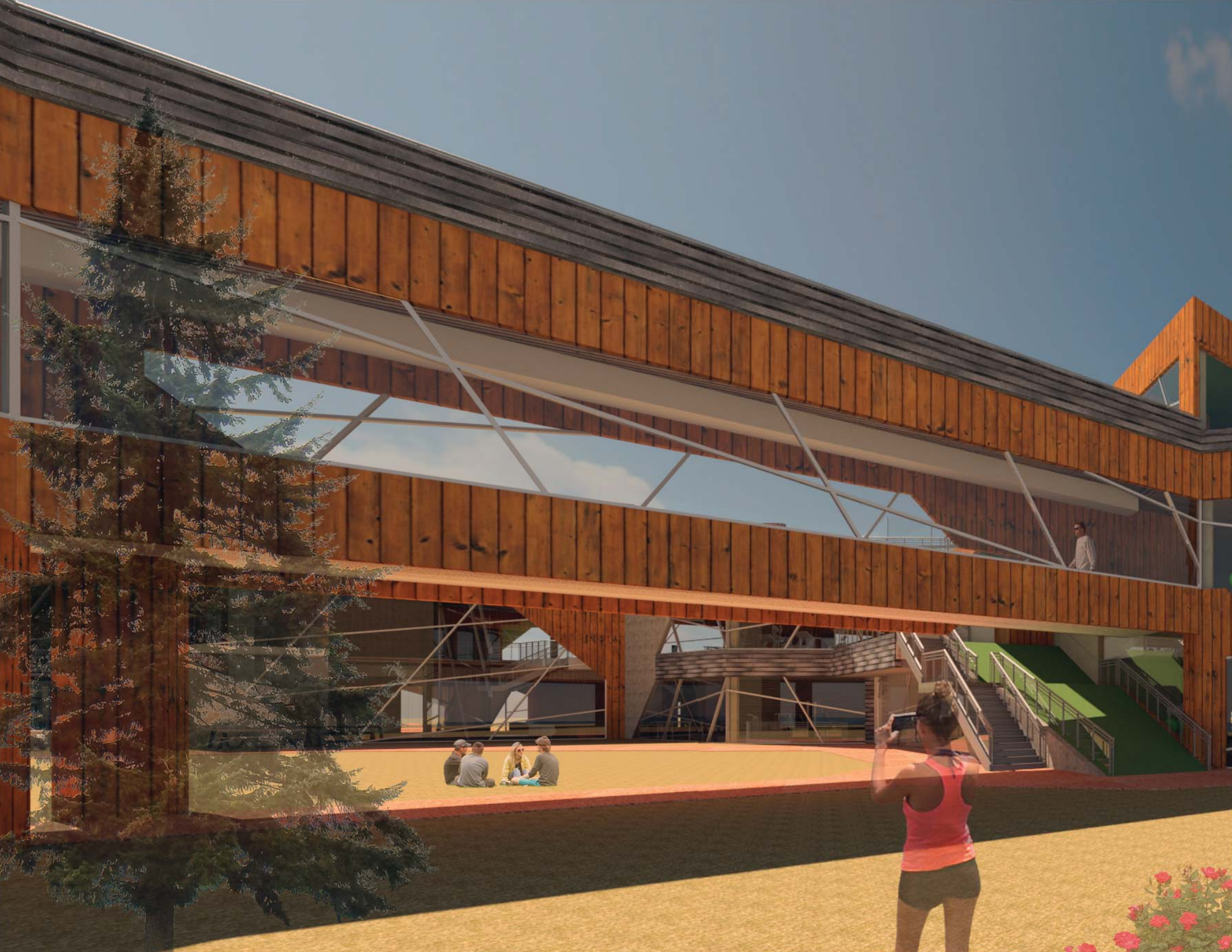
RECESSED RESISTANCE AREA //



// RECESSED FLEXIBILITY AREA

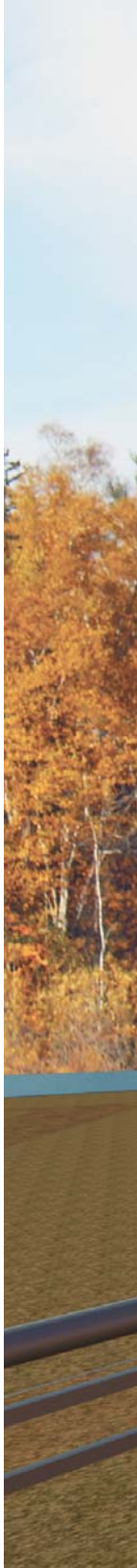
DYNAMIC MOVEMENT AREA //

// FLEXIBLE STUDIO SPACE



// SHOREFRONT
0101

WEST TURF RAMP //



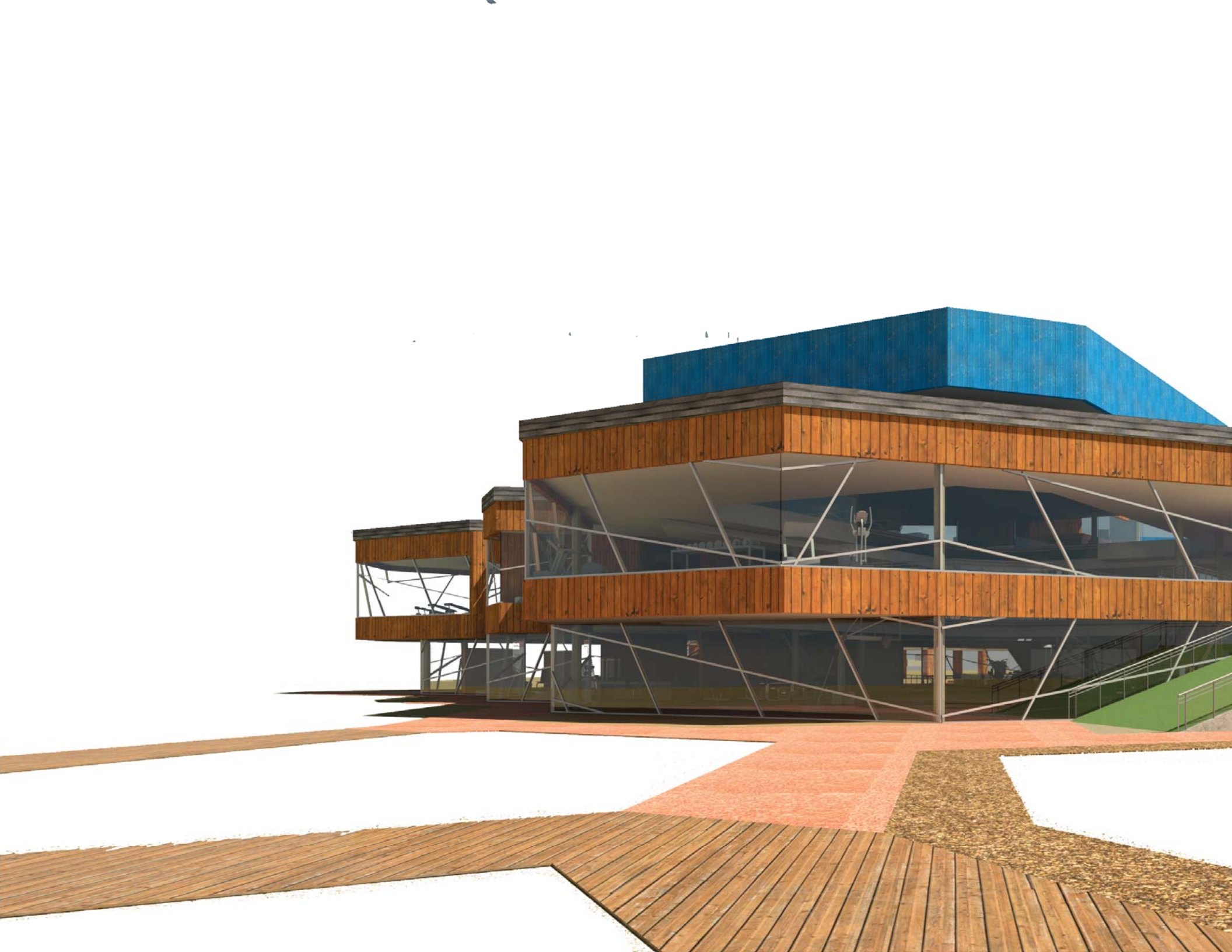
ELEVATED FITNESS AREA //

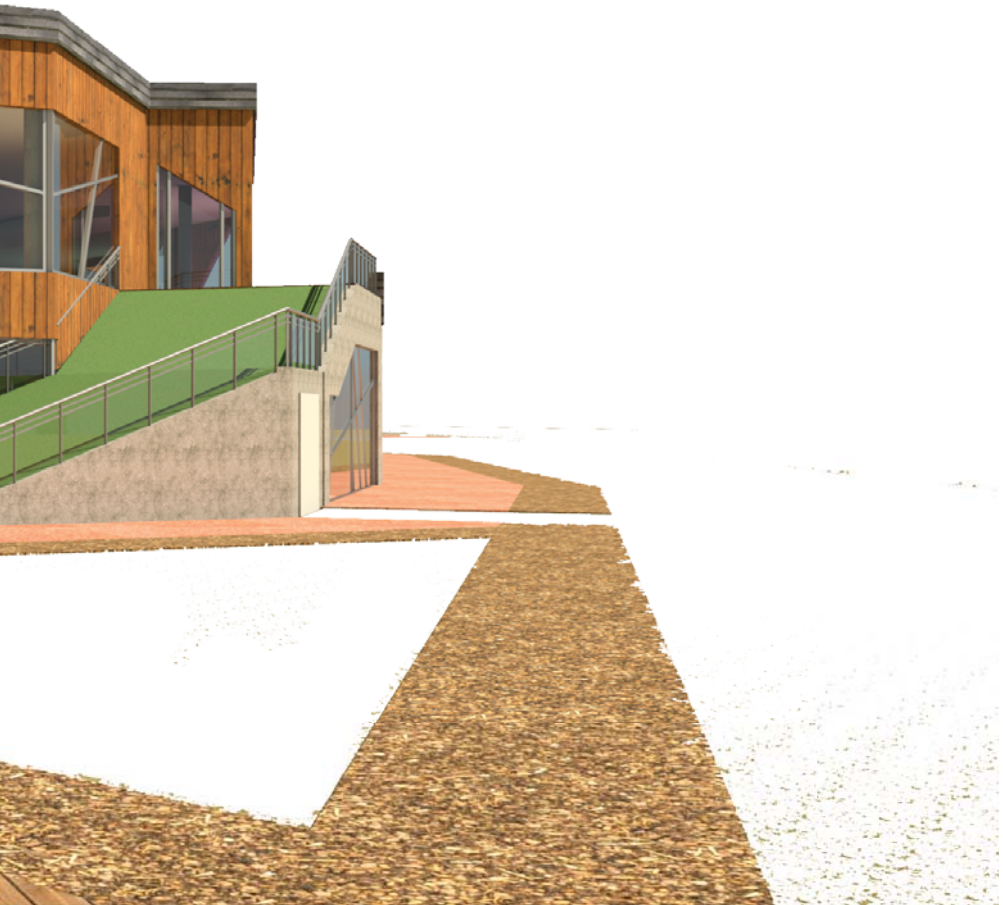
THE BREAK // VIEW 1

THE BREAK // VIEW 2

// RELAXATION AREA

0111





BOARDWALK //

// SECTION CUT

PA: SITE RESPONSE

The connection to the site made through the execution of this project would not have been possible without the spectacular site I chose. From the moment I first stepped on the site, I knew it would be the perfect place for a remote fitness center. Utilizing the circulation paths, stairs, and green ramps, the building began to form its own kind of maneuverable topography on the flat area of the site in which the building was placed. Using the idea of architecture as an obstacle and vehicle for dynamic movement, this building was able to make a unique cohesion in the otherwsie typical typology. The revitalization of the boat launch area and proposed boardwalks bring new life to the site, attracting the community and general public for social engagements and athletic gatherings.

Final building was able to emulate the curling pieces of drying mud found on the site. The angular fashion of the pieces breathed through the architectures many facets, with one highlight being the ornate window mullion pattern that mimics the formation of tree branches. The use of glass was highly effective in bringing in the ample light, views, and air that was need to suit the various spaces of the design.

PA: TYPOLOGY // PRECEDENT

After toiling over some of the decisions made regarding the design of the of programmatic space elements, I found that the end results was successful in pushing the envelope of space flexibility. The dynamic quality of this architecture lends itself well to the social aspects of the facility in alleviating some of the social barriers posed by current clubs. Looking back, a deeper incorporation of the childcare portion of the facility to the adult users could have been an opportunity to strengthen these social ties I'm aiming to fix. Getting kids to move at an early age sets an examle and precedent unlike any other gym.

Additionally, looking into some more social types of fitness and incorporating them into my design could have created a better connection between the social, economic, and environmental isses.

The innovative design strategies implemented in the final design neatly illustrates the idea of architectural forms informing movement through fun and aesthetic illusions.

Reconfiguring the use of many of the stereotypical gym elements allowed this building to take on a completely new form that begins to break the mold of indoor and outdoor exercise, creating a dynamic and symbiotic relationship between the two.

PA: GOALS AND EMPHASIS

Shedding light on some of the more theoretical aspects of my project allowed the building to grow beyond the bounds that I ever that this design could possibly encompass. Tackling the issues faced with the misconception of what it means to be fit created a new precedent in retrieving the true meaning and value behind personal physical fitness. The speculation on technologies role in our distraction from eachother and the environment paved the way to new insights in thinking about the design.

Innovative thinking was a cornerstone of this project and I felt I did a great job in pushing the limits to push for change.

REFERENCES/ APPENDIX

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PREVIOUS STUDIOS

ARCH 271 - Fall 2013 : Cindy Urness
Projects
Teahouse // Moorhead, MN

ARCH 272 - Spring 2014 : Joan Vorderbruggen
Projects
Dance Studio // Fargo, ND
Birdhouse // Fargo, ND
Dwelling // Cripple Creek

ARCH 371 - Fall 2014 : Steve Martens
Projects
Firehouse-Wellness Center // Fargo, ND
Cultural Learning Center // Minot, ND

ARCH 372 - Spring 2015 : Mark Barnhouse
Projects
NDSU Library // Fargo, ND
Research Facility // Racine, WI

ARCH 471 - Fall 2015 : David Crutchfield
Projects
Highrise // San Francisco, CA

ARCH 472 - Spring 2016 : Don Faulkner
Projects
Urban Design // CAN
Marvin Windows // Fargo, ND

ARCH 771 - Fall 2016 : Malini Srivistava
Projects
Wearable Artifact
Wall Systems
Solar Decathlon

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IDENTIFICATION

Since I was just a boy, I have always maintianed a tireless creative spirit, and a drive to design and innovate the world around us. Whether that be with my endless lego and KNEX contraptions scattered about, or endless sketches for my latest studio project I am always thinking with design in mind. Nature and physical activity are two things I hold near and dear to my heart, as the importance of the two make up the majority of my free time. I would like to thank all of my friends and family for all of the love and support throughout this 5 year journey. It has been an absolute pleasure learning and meeting new people, as these experiences have truly shaped me into the man I will be for the remainder of my life. Without all of you, I would not be where I am today at a personal, or professional level.


WELLNESS
PERSONALIZATION
COMMUNICATION
GROWTH
LANDSCAPE
INCLUSIVE
NATURE
FRIENDSHIPS
SOCIAL
COMMUNAL
ENVIRONMENT
COMFORTABILITY
ADAPTABLE
FLEXIBILITY
RELATIONSHIPS
WELCOMING
TEAMWORK