dynamic architecture:
a study of walter + building

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Abstract:

To design a successful space or building one must first understand the entire nature of the space. This thesis examines the dynamics of space (purpose), water (element), and building (space). The intentions of the project were to reveal the connection between architecture and purpose as well as building and nature. The thesis explores all of these areas using architectural practices and human experience.

The connections between the human dynamics and architectural dynamics become more evident throughout the thesis. Scale, proportion, movement and structure all played an important role in the final design of the space. In the pages to follow these aspects will be depicted and described. It was my full intention to try and understand the definition of dynamic architecture, as well as create my own definition. The drawings, sketches, and models include a variety of scale, proportion, movement and structure. Each portion of the project’s space was broken down and explored using these ideas. My final definition of dynamic architecture is expressed within the final drawings and images.
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The idea of a thesis struck me, as it does to all incoming students, as an opportunity to invest my time into a rediscopy of self. After several weeks of determining what a thesis was, and what I wanted it to be, I was able to zero in on the task at hand. One of my flaws as an architect that I was challenged with from the outset was my indecisiveness. Ideas that were relatively well thought out were often regarded as insufficient to me. After several different thoughts about a project that would hopefully define me as an individual I decided to look within for inspiration. As a boy growing up across the globe I developed a passion for sports, namely one, football (soccer). I never realized until I had finished my thesis that the energy and motivation that I’ve always had for sport was the same energy that I’ve used in my short architectural education. The truth of the matter is that I never thought of architecture like a game or physical challenge, but it can be. My thesis challenged me physically and mentally.
What is football? To answer this I thought it would be easy. I have played the game for as long as I can remember. The rules, formations, and tactics have long been engrained in my mind forever. But for a more rounded explanation I decided to research the topic and engage myself with others opinions. This truly define the sport I love. I started to read and re-read about the globalization of football. It had never occurred to me the importance of the sport carried into governments and decisions that affect a whole country. As a boy growing up I look on the passion for the game and its significance to my nation. My family and I moved throughout the globe and I was always able to remember my home and my people by rooting for my team. Football matches always take on huge significance blown out of proportion by the media. These games unite people and give them something to belong to. These sorts of feelings and emotions were what I wanted to aspire for. If I were to design a space or building how could I amplify the important moments by creating architecture that responds to the peoples passion for the game. Football has always had good and bad connotations. Hooliganism, riots, and violence are often connected to the sport. I believe the way it connects around the world through fences and meets between the seating and the field. In my opinion there are situations arise from people pushing their passion over the edge, and letting their emotions get the best of them. The violence is uncalled for and a blashmish on the game. The emotions of fans and players rise for the occasion and it does not take much to cross over into chaos. The passion for the game is what makes it great, but the violence that has stemmed from it isthe what tarnishes its reputation. The game of football is quite simple to understand, the rulebook is quite thin and the field is not complicated. The beauty of the game is made by the individuals and the skill of moving a ball. The improvising and collective understanding of the game make it special. Nearly the entire body is used in conjunction with the ball and field. Slapping and stirring the ball can happen numerous ways. The human body becomes the apparatus to guide the ball around the field. The movement of the body develops the situations and creates the flow of the game.

Two topics interested me from the start, one, the idea of dynamic architectural elements, and two, the connection between building and nature. The interconnection between these two ideas played a vital role in beginning the thesis and also in the final design.

To investigate the dynamics of architecture I decided to focus on the element of structure. Structure has always been of interest to me and the idea of incorporating it with the natural connections of sites helped to define the project.
The interest I developed with nature and architecture was based on the question of natural water. I wanted to establish a set of rules to develop the site and building based on rainfall. The initial studies regarding the precipitation on the site were used to determine the size of the building along with its location. Surface flow of water across the site was used to determine where parts of the program would be located. By analyzing the total square footage of the site as well as the topography, I was able to locate all of the necessary elements. The topography played a key role in positioning site elements and building. The idea of collecting water for use was established early. It became one of the more influential factors that drove the design. The question of moving the collected water also defined the building. Water moves in all directions, but to think of it in simple terms, I tried to manage the water in both horizontal and vertical planes. The movement of water throughout the site along with the previous study of topography and surface flow completely delineated the organization of the program. The end result was one that was consistent with the original idea, and can be seen in the final drawings and the beginning sketches.
Choosing a site proved to be very influential in the thesis. It allowed questions dealing with real conditions to enter the design process. It also provided context to respond to and real conditions. The application of the thesis to a real site helped to define the program and direct the project.

The site became a guiding principle to the program and organized my thoughts on what I should design. In short, the program was reduced to a clubhouse, field, and a park.

The field became the center of the thesis as it was also the center of the program. The field would occupy a majority of the site as well becoming the focal point of the project. It seems absurd to think a piece of land or space with such a simple design could become so important, but the field itself was not as important as what would occur there when it was being used. The field is a 100-120 meter by 75-85 meter space that is rigid and ordered. It has boundaries and proportions that were established long ago. These ideas of what the playing field should be were based on years of refining the sport. They are determined to maximize the beauty of the game. To give the people playing soccer the right amount of space and vantage points. The complexity and dynamics of the game is not seen in the field but in the game itself. The field is a prescribed space in which the game should be played.
The site chosen for the project was located in Alexandria, Virginia on the corner of route 1 and Franklin Street. The site was chosen because of its existing condition of a recreational field that belongs to the city. The proposed project included keeping the majority of existing trees and developing the site to acknowledge the surrounding environment. The site is located on a corner and has four edges that face a different typology: to the east is route 1, to the south is the community center, to the west is a two-story apartment building, and to the north are single family homes. The thesis started to develop around theories and rainfall and ground water. This site provided a large expanse of ground water that flowed in a southwesterly direction. The goals of the project were to redefine the site edges and utilized the precipitation for use throughout the site.
The program for the project developed slowly with the evolution of the thesis. Initially the former use of the site became the starting point for the project. In keeping with the idea of creating an urban park within the city I also wanted to emphasize the use of the space. The program developed into several small building that each served a individual purpose. The buildings were a locker room / bathroom building, covered seating, an a club house. Eventually the buildings were combined to form one large building and surrounding elements. The connections between the spaces were too strong to keep the uses physically separated.

Final Programitic Spaces:

Club house -
(includes locker rooms, shop/cafe, and picnic area)

Grand Stands -
(includes site walls and seating)

Park -
(includes field and reflecting pool)
Beginning a project that involves the creative side of the brain is extremely rewarding, but like any problem, there are solutions and there are more solutions. Narrowing down the desired outcome is one way of approaching the question of design. This more than anything enabled my journey to continue even when I thought there was no answer.

The process that I used to develop my thesis can be explained in one phrase: “Design is instinctive.” I used every media and thought process I knew, and many I had never imagined. I think that if you use what’s in front of you to design a place you can be successful, but if you use what surrounds you, the place will be complete.

Many smaller design problems presented themselves during my thesis. They too were a part of my thesis thought process by exploring different connections and solving similar problems.
process - site + field
process - water collection
process - grand stands
process - locker rooms
process - structure
The project was developed in a sequence related to the natural flow of water. The locker rooms began the process as the grounded element in which the water was connected to the earth. The solutions for this space revolved around air, light, steam, and water. Initially the lockerrooms were perceived as a individual building, but eventually the concept joined this space to the clubhouse. The design of the locker rooms also included the water collection tanks. The tank size and organization contributed to the order and layout of the lockerrooms.