Spring 5-5-2015

Activating Communities: A Space for Inclusive Recreation in Central New York

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Activating Communities:
A Space for Inclusive Recreation in Central New York

A Capstone Project Submitted in Partial Fulfillment of the
Requirements of the Renée Crown University Honors Program at
Syracuse University

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and Renée Crown University Honors
May 2015

Honors Capstone Project in Environmental and Interior Design

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Date: April 22, 2015
Abstract

The concept is to design a specialized sports and recreation facility for adults and children with physical disabilities. Located in the Near West Side neighborhood of Syracuse New York, this facility serves as a healthy alternative to destructive behavior that is common in this low-income area. It also becomes a fun destination for members within the community. The space facilitates current and future adapted sports teams by providing a venue for practices and tournaments. It also offers the necessary support and resources for families who are new to adapted recreation. Ultimately, this space serves as an outlet for those with physical and mobility impairments to experience the thrill of sports without limitations.

Even though the design process is not linear in nature, I progressed through a series of stages to achieve the final design. The six phases I will discuss in greater detail are as follows:
1) Preliminary Research: I started by gathering data and information from peer-reviewed articles as well as scientific and sociology studies. Then, I conducted interviews and surveys with disabled athletes and volunteered at adapted sports clinics to gain a better understanding of the user group I was aiming to serve.
2) Schematic Design: I generated preliminary concepts, ideas and sketches using my volunteer observations and directed research. I also utilized form studies with paper models to explore these concepts three-dimensionally and spatially.
3) Design Development: I refined the concept into a detailed list of activity areas with descriptions and spatial requirements. Simultaneously, I looked at precedent studies for additional inspiration based on good design examples of sport facilities that already exist.
4) Space Planning: I crafted the arrangement of rooms and furniture throughout three floors with careful consideration to adjacency of services and support spaces. I constantly referenced the Americans with Disabilities Act (ADA) regulations and guidelines for accessibility and fire safety codes.
5) Construction Documents: I drafted a coordinated set of drawings according to industry standards using Revit, which is a modeling and drafting software tool. This package serves as the technical communication medium of my design for construction purposes.
6) 3D Visualization: Lastly, I produced perspective renderings and presentation graphics to communicate the aesthetic and final vision of the project to the client. These were created using a combination of hand rendering techniques and 3D modeling programs including Revit and Google Sketchup. This is the secondary medium used in the project.

The goal was to bring accessibility to the forefront of design practice and reinforce our fundamental responsibility to design for people of all ages and abilities. This project contributes to the paradigm shift away from the marginalization of disabled athletes and towards the inclusion of differently-abled athletes. My passion for sports and recreation drove me to design a space that celebrates disability and advocates for more inclusivity. Most importantly, the program and concept for this specialized facility can be translated and applied to other adapted recreation programs in the area and around the world. This design advocacy strategy furthers the tremendous support and growth of adapted recreation, which was a primary aim of this project.
Executive Summary

My capstone project started with a passion for sports and recreation, which has influenced many aspects of my life. However, it occurred to me that one of the reasons why I have enjoyed being active ever since I could walk is because I have two fully functioning arms and legs. Shockingly, one in five people have a disability in the United States and I never realized how many people with physical or mobility impairments cannot take part in many sports because those activities are not accessible to them.¹ This is what pushed me to design an inclusive sport environment and advocate for more adapted recreation opportunities. This project allowed me to explore the emotional, physical and social benefits of sports and recreation.

Adapted recreation refers to the modification of traditional sports that allows people with disabilities to participate in recreational activities that are adjusted to fit their specific needs. Adapted recreation has gained tremendous support along with the growth of the Paralympic Movement, which began in 1978 with the creation of the first Paralympic team. Since then, people and organizations have rallied for more recreational opportunities because awareness for these programs was not widespread. As a designer, it was important to recognize the existing social context with which I was engaging.

It was also imperative to consider the implications of a specialized sports and recreation facility located in the city of Syracuse in Central New York. Specifically, I chose to situate my project in one of the poorest areas in the city. This location brings forth concerns about accessibility, affordability and centralization; all of which I wanted to address with this project. Through volunteer opportunities at adapted sports conferences and clinics, I observed two things that reaffirmed my enthusiasm for this issue. Firstly, I saw firsthand how beneficial adapted

¹ "Physical Activity & People with Disabilities." Infographic, 1.
sports were for the mental and physical well being of the athletes. Secondly, I noticed how many committed individuals and local organizations participated in the events and were eager to share resources. I harnessed this stewardship of knowledge and humanitarian spirit throughout my design.

The actual design process began with intensive academic, formal and primary research. This phase of the project allowed me to gather a vast amount of information about adapted recreation and its history as well as medical disabilities and satellite issues that related to my project. I engaged with this research on an academic level with peer reviewed journals and scientific studies. I also conducted interviews with disabled athletes and probed information at a personal level to balance out the findings. This preliminary research process created a foundation of knowledge upon which I made informed decisions about the rest of my design.

In the next phase I explored preliminary concepts with sketches and three-dimensional models based on some of the research I found. This is where I applied my environmental and interior design lens to the project and began to analyze the issues spatially. I identified adjectives such as exhilarating and inclusive as concept drivers and used those words to generate a schematic design, which is a basic outline or scheme. With this general idea in place I was able to think divergently about the various ways I could push the design and that was the purpose of this phase.

Then, I began to refine the concept based on more research and iterations of sketches in the design development phase. I looked at precedent studies for good examples of design that exist for this topic. I analyzed three case studies based on conceptual relevance, user similarity and overall accessibility in order to find inspiration that could directly relate to my project. Also,
During this phase I created an initial list of activity areas, which is known in our industry as a program.

Once I had a basic understanding of the program areas I wanted in the project, I started arranging the spaces using the existing conditions and parameters of the building I selected. During this space planning phase I considered adjacency of services and what spaces needed to be in close proximity to one another. Even though I had 50,000 square feet of available space, I carefully planned about 23,000 square feet based on the needs of the project that I identified. As a designer it’s important to not be superfluous and only plan what is necessary to include in a space. During this phase, another main concern was meeting all of the Americans with Disabilities Act (ADA) accessible codes and guidelines. These codes ensure that spaces like hallways, doorways and bathrooms all accommodate those who have disabilities. It is crucial to engage with these laws while designing because the codes affect the size of areas within the space, which requires additional thought and coordination during the space planning phase.

Also, I created a set of construction documents that serve as the legal contract for the project during the building process. This is the main method of communicating a design idea between the designer and other trade professions such as contractors, architects, builders and consultants. This coordinated set of drawings use industry specific vernacular to explain all aspects of the design idea from material specifications and wall construction types to overall dimensions of rooms. It is very important to develop this technical manual for the project because it ensures that the design will be completed according to plan. Even though this project will not actually be built, completing these drawings demonstrates skill and understanding of standard industry practice.
In addition to the two-dimensional documentation of the project, I intentionally created playful and inviting spaces to encourage participation and make guests feel welcome and comfortable as they interact with the environment. This strategy played a major role in the project coming to life in three-dimensions with materials, colors, textures and feeling, which is the intangible quality about a space that is so attractive to the people who inhabit it. Demonstrating that feeling with perspective renderings is the second medium designers use to communicate their ideas. These visualizations allow people to understand what they will see and experience in that environment. It’s a powerful tool used for clients to understand the vision for the project as well. In addition to illustrating the color and furniture scheme, these renderings show how that particular space could be used and actually lived in, which is essential to communicate.

An underlying outcome for this entire design process is a strategic plan that can be applied to other adapted recreation facilities around the world as a way to further the growth of the field. Through my design, my goal was to raise awareness for these programs and respond to the lack of accessible and inclusive environments for those with disabilities. It was important to acknowledge the needs of these amazing athletes and showcase their talents in a built environment dedicated specifically for them. Even though this project will not be constructed, the plan will serve many. This project is a great example of the importance of socially responsible design, not only for the benefit of the profession but also for the individuals themselves.
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Acknowledgements

I would like to acknowledge my interior design professors Lucinda Havenhand and Sarah Redmore for their guidance throughout this year long process; to my capstone advisor and thesis professor, Zeke Leonard, for his constant encouragement and always pushing me to go above and beyond my expectations and to my capstone reader, Katie McDonald, for her resources and expertise in the field of disability studies. Additionally, I would like to genuinely express my gratitude to my mentor, Peyton Sefick, who gave me a wonderful volunteer opportunity at the Fitness Inclusion Network and happily shared his stories and insights with me. Lastly, I would like to recognize all of my family and friends for their endless support.
Chapter 1

Introduction

Sports and recreation are two things that have been embedded in my lifestyle since I could walk. From a young age I’ve surrounded myself with the comraderie and excitement that come from being engaged in team sports and physical activity. Even though this has always been a source of passion for me I recognize that others may experience forms of impairment that impact their engagement in sports and recreation. Within the last 50 years, significant strides have been made towards inclusive recreation. One example of this larger movement is adapted recreation, which is a phrase coined to describe sport and physical activities that are modified to better fit the needs of those with physical, cognitive, visual or emotional disabilities. This concept has emerged and become increasingly popular because of a push for greater social equality as well as more enjoyable alternatives for people with health risks. For these reasons, there is a need for specialized facilities that cater to these new athletes now, more than ever.

For years, historic pieces of civil rights legislation have helped transform the lives of those with disabilities. Beginning in 1990, the Americans with Disabilities Act (ADA) was the first major piece of legislation that addressed the inequality the disabled faced daily. This law revolutionized the way people with disabilities were treated, in a similar way that the Emancipation Proclamation in 1863 recognized slaves as legally free. The Americans with Disabilities Act was liberating because it prohibited discrimination on the basis of disability in employment, government and public transportation. This law sought to eliminate barriers to accommodation in commercial facilities and other areas of public life.² It was critical that I understood the significance of this legal landscape because during the early 1990’s a design for a

totally accessible sports facility would have seemed outrageous. It was also important to understand the quality of life for disabled people back then and the film, *Lives Worth Living* by Eric Neudel, describes the situation really well. The film highlights the courageous efforts of disability rights activists who tirelessly fought these legislative battles during a time when “there was a belief that if you had a disability you didn’t have any desire to live a life.” However, the Americans with Disabilities Act was the first major step towards changing that belief. Soon after in 1997 the Individuals with Disabilities Education Act (IDEA) mandated special education and physical education be tailored to the individual needs of the children. With regards to laws specifically dealing with adapted sports - sports that are modified to accommodate the disabled population - the Amateur Sports Act of 1978 created the Committee on Sports for the Disabled (COSD) to help coordinate the development of the Paralympic team. Again in 1998, the Amateur Sports Act continued to advance the Paralympic Movement with the creation of the US Paralympic Coorporation (USPC). Prior to these legal achievements, there was no justice for the disabled population but these milestones established the foundation upon which the field of adapted recreation has grown and gained tremendous support.

The rationale behind the design for a specialized sports and recreation facility stems from my own personal experiences as well as the positive outcomes that I’ve observed through volunteering at adapted sports clinics. There are many potential physical and emotional benefits of exercise that are useful for everyone but specifically for those with disabilities because they are more prevalent to secondary health conditions like high blood pressure, obesity, diabetes and depression. According to the National Center on Health Physical Activity and Disability (NCHPAD), more than 56 million Americans are at a greater risk for developing these

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conditions, which are associated with their sedentary lifestyle.\textsuperscript{5} Physical activity and adapted sports can improve people’s ability to perform daily activities by increasing cardiac and pulmonary function. Exercise can also help protect against the development of chronic illnesses over long-term periods of time, which is why a facility dedicated to providing specialized physical activities would greatly benefit the disabled population.\textsuperscript{6} I recognize that some existing recreational environments have direct and indirect barriers that limit the inclusion of those with disabilities. There are environmental barriers such as the cost of equipment and lack of transportation or access to these facilities. There are also social barriers, which include the lack of program awareness, quality professionals in the field and peer support. Through interior design and creative problem solving I explored ways to reduce some of these social barriers to inclusive recreation while raising awareness for this issue and serving as an advocate for those who want to experience the thrill of sports without boundaries.

\textsuperscript{5} "Physical Activity & People with Disabilities." \textit{Infographic}, 1.
\textsuperscript{6} James, Rimmer. "National Center on Health, Physical Activity and Disability." \textit{Get The Facts}, January 1, 2015, 18.
Chapter 2
User Group

This project originated with the users I chose to serve: children, adolescents and adults with physical disabilities or impairments. First, it was imperative to understand the existing stigma surrounding all people with disabilities. I discovered four main models that exist, which categorize people with disabilities and affect the perception others have of this group. The four main models I considered were the medical, charity economic and social models. For years, the medical model has contributed to a negative connotative response that can be triggered by having a physical, cognitive, visual or auditory impairment. According to this model, disability is viewed as an abhorrent and pathological problem of the person, requiring sustained medical care to “fix” the disability. Similarly, the charity model depicts people with disabilities as victims who are deserving of pity. The economic model assesses a person’s inability to participate in work if they have a disability and how that ultimately affects productivity. These three models all focus on the shortcomings of disabled people. It wasn’t until recently that the social model of disability emerged to bring forth a different view and now is the internationally recognized way to view and address disability. Instead of seeing disability as an attribute of the individual, it is seen as a result of people with impairments interacting with physical, attitudinal, communication and social barriers within the environment. With this in mind, I chose to challenge those barriers and design a space that is physically accessible, celebrates those with disabilities as the primary users of the space and offers support and resources so the users can make informed and


independent decisions of their own free will. The goal is to return the power away from the disabling social environment and back to the user.

This user group comprises a staggering 15% of the world’s population. In the United States alone, 30.6 million people have a physical disability that prevents them from walking, which consequently hinders their ability to participate in many sports. According to the World Health Organization, studies show that people with disabilities have a higher tendency to engage in risky behavior like smoking, poor diet and physical inactivity. Vulnerability to these behaviors is mainly caused by prohibitive costs of health services because over half (51-53%) of families of disabled people in low-income countries cannot afford proper medical care compared to the 32-33% of non-disabled people. These statistics are extremely relevant in Syracuse’s Near West Side community, which is one of the poorer neighborhoods in the city based on income per capita. It is apparent that a specialized facility for sports and recreation located in that area of Syracuse would help address a need for more healthy alternatives to the destructive behavior that is common in that area. This facility would address a need for people with disabilities and the general community as well.

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Chapter 3

Site Location and Conditions

Based on my research, I chose to locate my project within a section of the Case Supply building, which is on the edge of the Near West side neighborhood. When given an opportunity to tour the building in its existing state I saw a raw, abandoned core and shell with a lot of potential. The site fit many of the criteria I considered important for an accessible sports and recreation facility. First, the empty yet open floor plan could accommodate large sport arenas and activity spaces. Equally as important, the location of the building is accessible by car and public transportation. It is also less than 2 miles away from a major highway connecting many of the surrounding towns in Central New York. A local bus stop and an open parking lot in front of the building satisfy my requirements for site accessibility, though I recognize there are still issues with transportation and access on a larger scale that would require generous efforts by the city of Syracuse to address.

Even though the space is currently unoccupied, two active tenants, WCNY and Proliteracy, flank it. As the designer, one of my responsibilities included dealing with acoustics and significant noise reduction strategies to ensure a successful relationship as neighbors with those other tenants. Recreational facilities often experience high levels of noise and the distortion of sound (long reverberation time) makes conversation difficult. These spaces tend to be noisier due to the activity level, high ceilings and reflectivity of interior surfaces. To remedy this, I used soundproofing barriers and insulation within floor, ceiling and wall assemblies to help reduce the reverberation time of sound. Other existing conditions I needed to work with included exposed brick buttresses, irregular wooden beams, concrete floors and a wooden joist ceiling. There were many opportunities to preserve the historic value of the building while introducing contemporary
finishes and technology. The large windows provide spectacular views of downtown Syracuse as well as an abundance of natural light and air circulation. These existing conditions as well as the surrounding amenities of the building all contributed to the context of the project.
Chapter 4
Volunteering

It was crucial that I understood the experiences those with disabilities face daily in order to design a meaningful solution that enabled them to easily move and play. I really enjoyed engaging with the end users because that allowed me to make better-informed decisions about how the environment would affect their opportunities. I conducted surveys, interviews and in-person observations to gain insight into how these athletes use their spaces. I completed 25 hours of volunteering with the Fitness-Inclusion Network (Fit-In Network), a subsidiary project of the Burton Blatt Institute at Syracuse University. This was the key to unlocking the link between my original passion for sports and the issue I was trying to address. My experience with the Fit-In Network was extremely beneficial because it was semi-realized version of my project.

The first adapted sports clinic I attended was sponsored by Move Along Inc, which is an Oswego based non-profit organization, one of many that are advancing inclusive recreation opportunities in Central New York. The event was hosted in Flannagan Gym on Syracuse University’s campus in tandem with the David B. Falk School of Human and Sport Dynamics. The goal was to bring together students of all ages and abilities to try out adapted equipment. This was also my first immersion into an adapted sporting event. When I strapped into a competition-grade wheelchair and had to rely solely on my arms and hands for mobility, I was stripped of my usual comfort as an athlete. I was determined to master maneuvering in a wheelchair but quickly understood that it takes time and practice. This was a defining moment in the design process for me because I started to grasp what my end users actually felt when they were completing the smallest of tasks such as dribbling a basketball or making a fast turn. I knew from then on I wanted to design a space that supported those feelings of accomplishment. For
example, during the event I noticed the cavernous gymnasium was filled with people and booming with activity and that atmosphere added to the overall liveliness of the events. From a design perspective, the energy of the activities and the inherent energy of the large space fueled each other in a way that I wanted to mimic in my design.

The event also taught me about the inner workings of adapted sports in terms of set up and storage. I helped unload the equipment, piece by piece from a trailer and take it through a freight elevator to the second floor. Then, using multiple trips, the equipment was rolled and carried from one end of the building to the other through three sets of double doors until it finally reached the gym. Assembly ensued and I intently watched men and women piece together this kit of parts until 25 wheelchairs, six handcycles and four sled hockey sleds were lined up in front of me. Even though the whole process took about 25 minutes I was surprised that the set up was so tedious. I also noted the importance of efficient entry sequences that are accessible both for people and equipment.

The rest of the event carried on swimmingly; students and professional paralympic athletes engaged in friendly competition with an adapted basketball game while the rest of the students explored the nuances of the other equipment. I realized how differently wheelchair users perceive the built environment from their seated position. For example, the ceiling plane becomes much more noticeable and general heights of objects are more apparent especially if they are out of reach. Regardless of the different vantage point, many students, including myself, had positive reactions to the event. Kyle C., one of the able-bodied student participants shared his thoughts with me on the event saying, “I would absolutely do that again. I enjoyed overcoming the challenge of moving without my legs after a while, but it was definitely hard to adjust…the whole event was really inspiring and enlightening”.
Upon exiting the gym after the event was over, I pressed the automatic door button then turned back to see Bob, one of the paralympic athletes in his wheelchair, wedged between the doors. Though the exit is ADA compliant, his wheelchair was too wide to fit through because the axle of sport wheelchairs are wider for extra stability. In that moment, I realized the disabling power of the built environment just based on the width of a door. Even though Bob had tremendous resolve and remained unphased, I was mortified as a designer of built spaces. Eventually he was able to exit the building through two adjacent doors that were held open at the same time but it was an eye-opening event. I was inspired to approach codes that dictate accessibility in a better way. These regulations are just a minimum and being compliant with those codes does not necessarily mean the space will be truly accessible. I would not have gleaned this crucial information without actually working with the end users in a similar environment to the one I was designing.

Another integral volunteer event I attended was the 2nd annual Fit-In Conference, which focused on community engagement. Throughout the daylong conference I was able to speak with incredible professionals and hardworking parents. Every personal account connected me to the experiences of the disabled population in a deeper more meaningful way. I discovered that even though everyone has a different story and different circumstances, people are willing to come together to advocate for more recreational opportunities for their loved ones. I was astounded by the influence and reach of the entire Central New York community. Their grassroots approach was humbling; with an issue this far-reaching it takes commitment and dedication to attack it on a local level. Various media presentations took place during the conference, all of which reiterated the importance of a support system. This event inspired me to establish three distinct yet important user groups. Primary users are the children and adults with physical disabilities. Secondary users are the community leaders and professionals that provide counsel, support and
expertise. Lastly, the tertiary users are the family and friends that can spectate or participate right alongside the athletes. Studies show that family involvement and support from the beginning is important for people with disabilities to maintain an active and positive lifestyle. So it is clear that targeting the whole family in my design is a strategy that will have lasting effects.
With enough observation to create a preliminary design idea, I looked at precedent studies for more inspiration. I critically analyzed three different built environments based on three criteria: conceptual relevance, user similarity and accessibility. This process allowed me to evaluate the practicality of certain design solutions as well as their feasibility in Syracuse where my project is located. Most importantly, I conducted these studies to find design strategies that I could emulate in my own project based on these examples of good design.

The first precedent study is Morgan’s Wonderland, an accessible, family fun amusement park in San Antonio, Texas. Since it opened in 2010, this attraction has been providing a safe and inclusive environment for individuals of all ages, needs and abilities to come and play with their family, friends and caregivers. The colorful 25-acre park, with themed outdoor and indoor spaces, admits anyone with a physical or cognitive challenge free of charge. Although the focus of the park isn’t on sports and recreation the widespread layout encourages active movement and social play subliminally, which is an effect I want to achieve in my space. Morgan’s Wonderland welcomes the entire family and that support builds self-esteem and confidence in the children. Also, the seamless integration of both adaptive and traditional equipment throughout the park reinforces their mission of inclusion. From an accessibility standpoint this attraction sets a high standard. Although the user group is the same target audience that I am designing for, this precedent study doesn’t focus enough on sports to have any direct correlations between programs. Lastly, the outdoor spaces wouldn’t translate well in Syracuse due to the harsh winter weather, but there is much to be desired about a fun “destination” experience that brings many
members of the community together.  

The Virginia G. Piper Sports and Fitness Center (SpoFit), in Phoenix, Arizona, is dedicated to providing exceptional adaptive sports, recreation, aquatic and fitness programs that promote overall well-being for people with disabilities. The architect, Ilan Baldinger, designed this specialized facility beyond the ADA minimum requirements in order to make it truly accessible. Elevator buttons are lower than standards to be within easier reach. Hand dryers are placed at ADA-required level and even lower to be more usable. The concept “room for all” was implemented throughout the facility by adding a little extra room for everyone, especially wheelchair users. Baldinger provided various viewing areas from different vantage points to extend consideration to spectators as well as the participants. Bright colors throughout the space provide cues to patrons with visual impairments who can distinguish different programming areas that are denoted with contrasting colors or patterns on the floors and walls. Although the space is a leading example of accessible design for adapted sports there was no mention of bringing community leaders into the space to mutually benefit from sharing resources. This is an important aspect of my project given the active community involvement that already exists in Syracuse.  

My final case study looked at the Willis Carrier Recreation Center (Carrier Park & Challenger Field of Dreams), which is planned to be the leading, all-inclusive outdoor sports and wellness complex in Syracuse. It will provide fully handicapped accessible, advanced level fields that will allow for tournament competitions in little league baseball, soccer and lacrosse. The complex will also include playgrounds, a walking trail, basketball courts, covered picnic

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pavilion, concessions, retail, bathrooms, changing areas and parking, which will make it a destination for residents and visitors of Central New York. One aspect of this project that I wanted to translate indoors was creating a balance between organized competitive sports and more playful recreation opportunities. This is an effective strategy for spreading awareness without intimidating those who may be nervous to try adapted sports.\textsuperscript{15}

Chapter 6
Design Development

One of the initial challenges I faced before I started designing was figuring out how to ease the insecurity of people who are afraid to try adapted sports. To do so, I drew upon the psychological value of recreation. Experts claim that recreation restores “that passion for playful activity and desire to experience joy and pleasure in life, so deeply inherent in any human being.” So, I chose to include a variety of introductory levels of recreation as well as competition level sport areas with plenty of room for spectating. This lets guests have plenty of options for involvement without feeling pressured. Another important consideration was the high cost of equipment, which is an uncontrollable factor that deters participation for many families. As a solution, I offered two different options to ease the burden. First, an equipment rental program, sponsored by a local organization ARISE, will let families try equipment for extended periods of time. Secondly, all guests have the ability to try a wide range of donated equipment on site for free. I was able to apply my observations from my volunteering experiences to determine the size and placement of the equipment storage area. First, I put it in close proximity to the freight size elevators to minimize the distance people and equipment needed to travel. Then, I integrated a wall-to-wall rack system to efficiently store and organize not just wheelchair frames, but also extra wheels, helmets, safety belts and other equipment. Finally, there are “gates” or small, designated channels where pre-assembled equipment can be housed for easy access. The space is large enough for athletes to move around and pick out which piece of equipment they

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want to try, which fosters their independence. Therefore, even the storage spaces are designed for the primary users in mind.

Throughout the design development process I frequently thought about the space two-dimensionally and three-dimensionally. I constantly updated the program with the evolving conceptual design for each space. The program is a detailed list of all the rooms and open areas, their square footage and spacial requirements. I also created an adjacency diagram (Figure 1) in order to illustrate which areas should be situated directly or remotely near each other.

Figure 1

In addition, I calculated the occupancy load for each space, which dictated the maximum amount of people allowed in that space given the fire code for that occupancy group classification. Often I found myself adding support spaces for the larger features in my program as well as shifting spaces around until I found the most logical arrangement. All of the circulation space was
extended to allow for two sport wheelchairs to pass each other easily. Even though ADA code specifies you need a minimum of 48 inches I provided 60 or 72 inches if possible. These considerations largely affected the total net area of the project but ultimately all of the code overlays were coordinated with the space plan of the project.
Chapter 7

Space Planning

During the space-planning phase of the project I was challenged to use up to 50,000 square feet of space efficiently and purposefully. The goal was to break away from the expectation that disabled persons should remain on the first floor just because that is the most accessible. Instead, all guests are welcomed in on the first floor and encouraged to travel upwards to the second and third floors where most of the activity is planned. I selectively used different proportions of the floors as a way to affect the experience the users have on each level. The illustrations below show how much of each floor I designed (Figure 2 and 3).
Immediately as the guests enter the building they see the reception area, which is meant to entice and excite the guests with bold graphics and colorful materials before they move to the upper floors (Figure 4).
Here the guests can find general information and wayfinding but they must travel upwards to be involved in any sport related activity. The second floor is designated as the community outreach hub. It serves as a resource center for community leaders to share their knowledge and continue their advocacy. Coaches and athletes can utilize office space to help manage their teams. General members of the community, such as physical education teachers, can take workshops and learn about new adapted sport techniques to implement in their curriculum. Finally, a resource library stores a comprehensive set of research publications, journals and small equipment samples so that guests have access to the latest information in the field.

The entire third floor is used for sport and recreation opportunities. One of the main features is a multi activity court, with rounded corners and recessed goals, which accommodates wheelchair basketball, power soccer, tennis and volleyball all in one. Throughout the space planning process I consulted Peyton Sefick, a power soccer player for CNY United as well as the Fitness Inclusion Network Project Coordinator. Since he has first-hand experience in these environments I frequently asked for his insight on material choices and accessibility. For example, he advised that I use traditional hardwood floors for the court instead of resilient rubber flooring even though rubber may be softer on impact. Contrary to popular belief, the rubber flooring doesn’t provide enough traction for the wheelchairs to grip when the athletes need to make high-speed turns. Given that one of a designer’s primary concerns is safety, I specified a more appropriate material for this situation that enables full performance for this specialized user group, which I only would’ve known by talking with an athlete like Peyton. Immediately off the court, I designed two team rooms with lockers, bathrooms and showers, allowing competing teams to gather and prepare before games. Adjacent to the team rooms and the court is an equipment body shop with adjustable tables and tools should athletes need to fix their equipment between games. Stadium seating and announcer’s boxes flank the court creating a 180-degree
stadium experience. Another major feature is the 5,000 square foot indoor playground with designated zones for a rock wall, focused throwing games and expressive play. Since there are no permanent separations between activities, guests are encouraged to move freely throughout the space. I designed a custom floor pattern using the spokes of a wheelchair as inspiration to create a vibrant pattern on the floor (Figure 5).

![Figure 5](image)

Small ramps are integrated throughout the space as a subtle tool to get children and adults to be active, while being reminiscent of an actual playground. Adjacent to the playground I’ve designed a player’s lounge café where families can take a break and purchase healthy snacks. These touch down spaces are a necessary complement to the high activity areas featured on the third floor. Offsetting the sports and recreation with places to sit, observe and recharge welcomes more participants and reinforces that sense of community.

Ultimately I used just under 23,000 square feet to create a welcoming, uplifting and inspiring environment that caters to a wide variety of needs and abilities. I provided enough room for wheelchair users to navigate in and around each space while also understanding the tremendous cost for heating and cooling a large space. I justified my design decisions with my personal observations as well as insights that I gathered from outside sources, making all of the choices thoughtful and well informed.
Chapter 8

Activism

I approached this problem as both a designer and an advocate, by looking beyond the expectations of this project and I considered solutions that could be applied elsewhere in other dimensions. Although this design will never be realized I’ve produced a plan that others can use as inspiration. The spatial and programmatic solutions I’ve implemented could be translated to many specialized recreational facilities or even existing programs that are here in Syracuse. Inherent in the design I’ve included opportunities for children and adults to explore the levels of adapted sports and transition at their own pace. Also, centralizing services into one place is a call to action for many local organizations to follow.

Overall, the entire space was designed in favor of those with disabilities. Everything from furniture selections to the standard dimensions of doors and windows were specified to accommodate the widest range of disabled and paralympic athletes. All of the bathrooms are ADA compliant instead of just one or two that are typically required in most facilities. This is also a more family friendly option especially for the users with young children and strollers. Additionally, in the event that someone who is disabled wants to become a staff member, all offices, desks and reception areas are ADA compliant as well. Extended consideration was given to those who are sensitive to overstimulation by providing more intimate retreat rooms and announcer’s boxes in the viewing areas. This enables more people to participate in an environment that is tailored to their own needs and comfort level. I’ve devised a strategy to support and empower those to complete physical activities on their own or with limited help. Fostering this level of independence is instrumental in building self-esteem, confidence and self-efficacy for these athletes, which will have long lasting effects on their life.
Chapter 9

Implications

Ultimately, this project presented many opportunities for engagement via interactions between the users, the site and the Near West Side community. The goal was to expand the dialogue about disability and sport on a local level so that the issue is better recognized. For this reason, I’ve designed a space to showcase the talents of the children, adolescents and adults who will be the stars of the space as a symbol of positive reinforcement. Most importantly, the implications of this project relate to social justice because disability rights and human rights are one in the same. Design plays a major role in facilitating awareness for these issues. My aspiration is to inspire future generations to accept one another regardless of appearance or ability in an environment that is welcoming and encouraging.
Works Cited


Lives Worth Living. Storyline Motion Pictures, 2011. Film.


"Physical Activity & People with Disabilities." Infographic, 1.


SCALE: 1" = 1'-0"

1. 3/4'' FROSTED GLASS TRANSACTION TOP WITH BEVELED EDGE ON 3/4'' STAINLESS STEEL TUBE SUPPORTS
2. 1/2'' TURQUOISE TRANSLUCENT PLEXIGLASS WITH FLAME POLISH EDGE MOUNTED ON 2'' X 2'' WOODEN SUPPORTS
3. 1-1/2'' SOLID SURFACE CORIAN COUNTERTOP; COLOR: DESIGNER WHITE; FULL BULLNOSE EDGE
4. 3/4'' PLYWOOD FRAME PAINTED BENJAMIN MOORE NATURA; COLOR: TANGELO 2017-30; FINISH: SEMIGLOSS
5. JOHNSONITE BASEWORKS THERMOSET RUBBER BASE; 4'' STANDARD TOE; COLOR: CHARCOAL
6. 3/4'' PLYWOOD FRAME PAINTED BENJAMIN MOORE NATURA; COLOR: TEAL TONE 663; FINISH: SEMIGLOSS
7. 2'' X 4'' BLOCKING SECURED TO FLOOR

OPERATION RECREATION
104 Marcellus Street
Syracuse NY 13244

MILLWORK DETAILS

Project Number: 20152
Date: April 7th, 2015
Drawn By: Cassie Pettinati
Checked By: Z. Leonard, S. Redmore

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