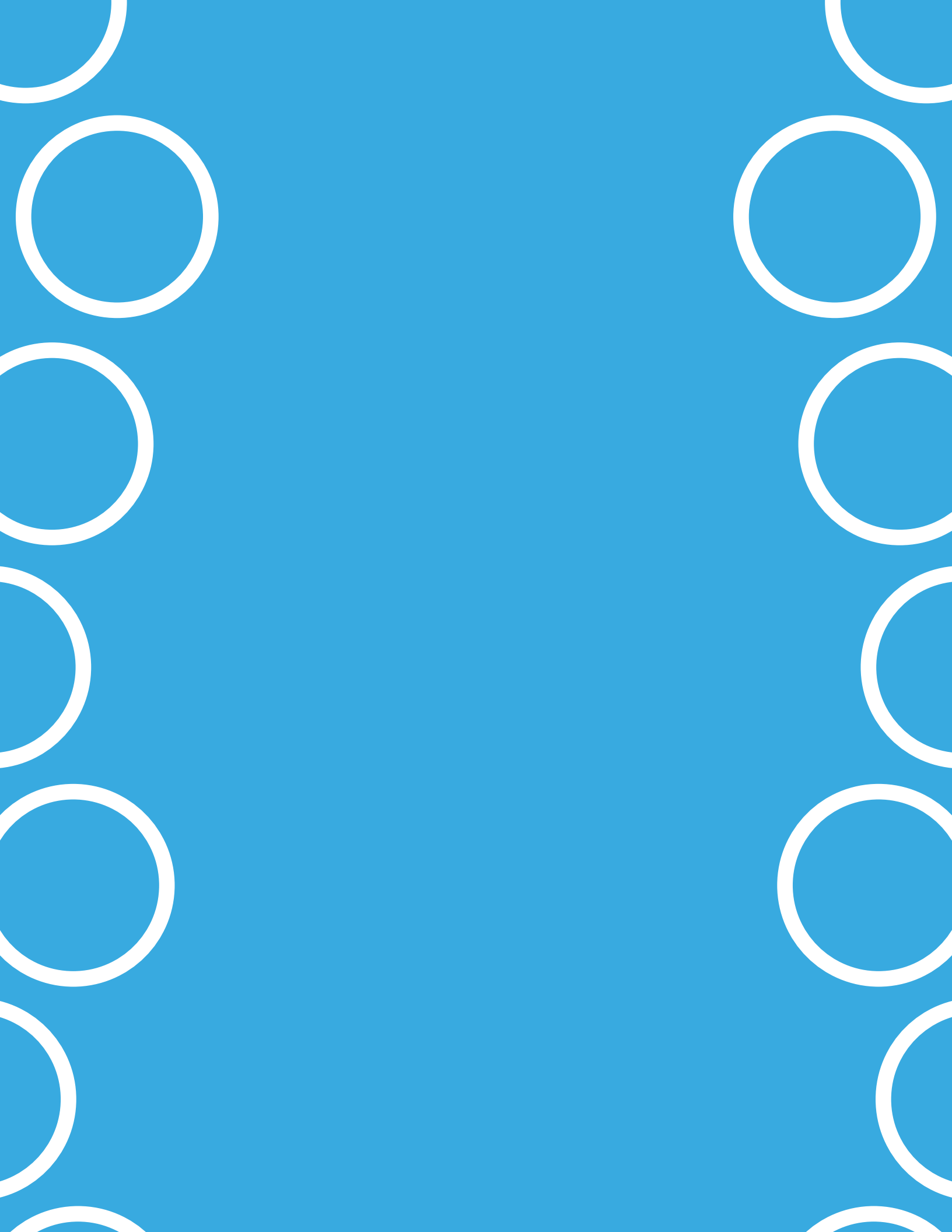


# Independence For Young Adults With Disabilities



# Independence For Young Adults With Disabilities

Jonathan H. N. Sidmore - North Dakota State University - ALA Master Program



# Independence For Young Adults With Disabilities

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

By  
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In Partial Fulfilment of the  
Requirements for the degree of  
Master of Architecture

North Dakota State University Libraries Addendum

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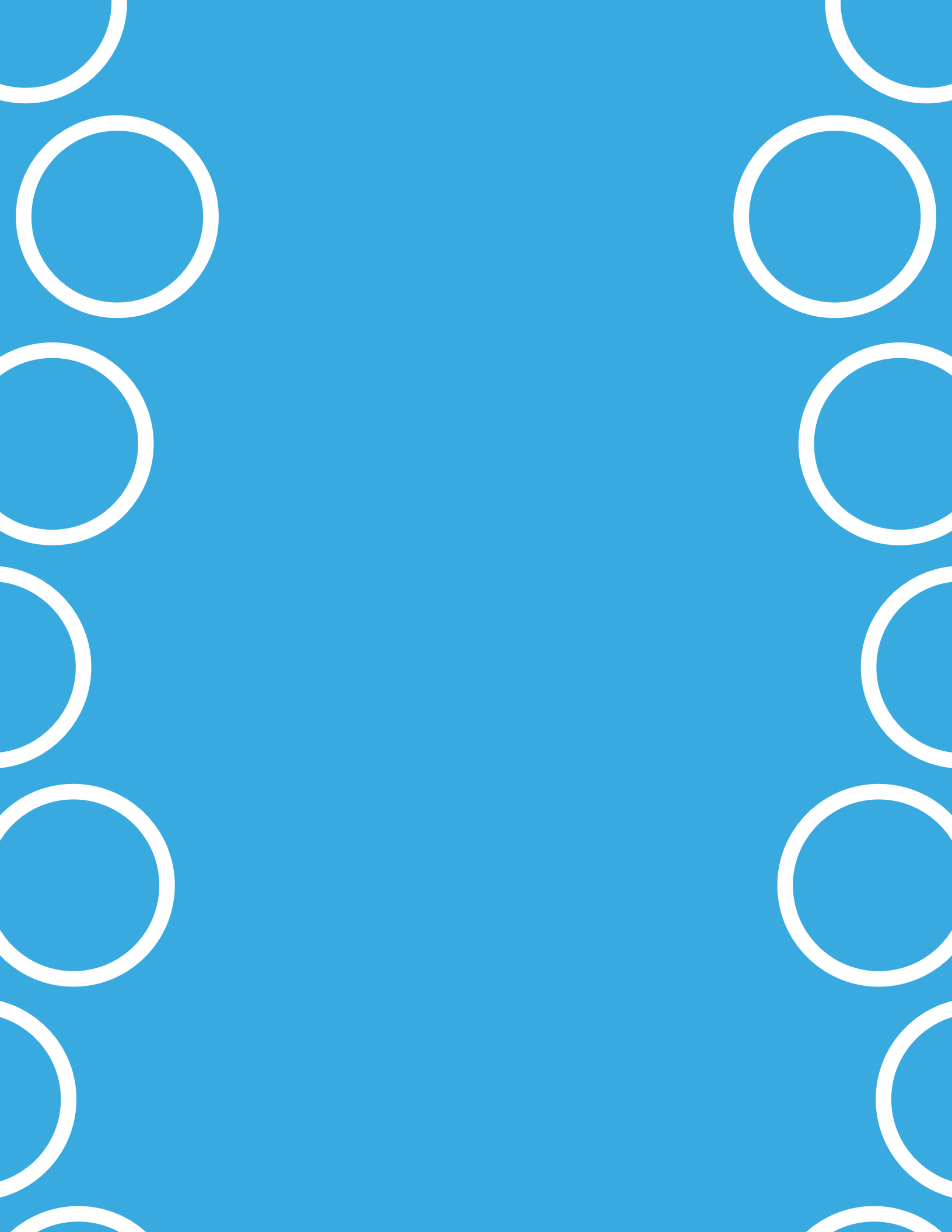
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# Thesis Proposal



# Thesis Abstract

In today's society there are young adults with disabilities who need assistance with day to day activities. Most of these young adults either live at home with their parents who help them, in nursing homes, or even in an institution. Currently there aren't many good options for young adults with disabilities to live and get their needs met. My thesis is designing a place for these young adults to live, thrive, and have a chance to live somewhat independently. I want this project to break stigmas that go along with disabilities including: Social Avoidance (people with disabilities may be left out of social activities or people may be hesitant to talk to someone with a disability), Stereotypes (people with disabilities may be presumed to be helpless, unable to care for themselves, or unable to make their own decisions), and Internalization (people with disabilities may themselves adopt negative beliefs about their own disability and feel ashamed or embarrassed about it). Lastly, this project will create a sense of community within the area as well as in the building itself. The challenges that are with this project are: how do you design around the needs of different disabilities, what are the necessary needs for people with disabilities, and how do I create a community for people with disabilities? Using research to figure out these challenges, this project will propose the best solution for young adults with disabilities to live somewhat independently and to thrive within their community.

**Title:** Assisted Living for Young Adults

**Typology:** Assisted Living and Multi Use Apartment Building

**Site:** Minneapolis, Minnesota along E Lake St. between 13th Ave S and 14th Ave S

# Thesis Narrative

## Context

In the state of Minnesota, 21.7% of adults have some type of disability. Those disabilities include mobility, cognition, independent living, hearing, vision, and self-care. In Minnesota, if young adults need assisted living, they are more likely to live with their parents or live in a nursing home. Living with their parents can leave a lot more stress and pressure on the parents to continually take care of them as well as keep up a job. Also, as the parents age, it may become harder to take care of their child. Putting them in a nursing home isn't the best solution either because it's more geared towards older adults and it can be costly.

## Premise for Investigation

I believe that young adults with disabilities will thrive better in an apartment building setting where they are living "on their own" in a sense instead of being in a nursing home or with their parents. I think people with disabilities will feel better and more comfortable in an apartment setting. Also creating a community of people who understand what they are/have gone through will make them feel understood, safe, and comfortable.

This project will study how to give people with disabilities, mainly young adults, the things they need to live on their own. For making this project about the resident who will live here, the main focus of the study will be to make sure that the residents are getting their needs met as well as making them comfortable in their living situation. In the architecture standpoint of this project, the project will study the impact of urban renewal with the building being mixed-use. Lastly, studying on how communal living situations differ from normal apartment rooms. Most of my research will be done by looking at information in websites, journals, articles, and case studies. Some interviews will help with understanding the needs for people with disabilities.

At the end of these studies I hope to understand the needs of people with different kinds of disabilities and to use that information to design for them. When it comes to urban renewal, I hope to understand what the community needs, not just the people who live in this project, but also the ones that live nearby. I also expect to find the differences that are between communal living situations and normal apartments and use that information the better the project and building design.

## Design Solution

As previously stated, this project is a mixed-use assisted living apartment building for young adults with disabilities. I want the design of this project to be focused around the needs of the residents who will be living here to help them thrive and give them the tools they need to live on their own. Also, this being an urban renewal project, I want to create a sense of community by making the first floor a commercial use space. Lastly, creating a mix of communal living and normal apartments will give the residents the different options and opportunities.

Designing around the resident's disabilities will help make them feel more comfortable and feel like this is the place for them. Designing above the ADA code minimums will help around the design portion of this project. Designing rooms for different disabilities will be important, but at the same time a challenge to design not just for one person, but for many.

Specific commercial use will be made within this project to create job opportunities for the young adults with disabilities as well as inviting people outside of this project. Creating jobs for the people who live here, will help them interact with the community and create revenue to sustain themselves living here since assistant living can be expensive. Within this project I would like to create multiple communities and interactions between people. The first one being between the residents who live within this project. The next one being between the residents and the assisted living works. Finally, I want to create a community between the people living in this area and the residents. I plan on using urban design to create this sense of community using sidewalks, transportation options, green spaces, and mixed uses.

Creating a communal living and normal apartment situation will give the residents a choice between different kinds of rooms to live in. Living in a communal living setting gives them the options to live in a more social situation and given the opportunity to make connections with others. This also gives them the opportunity to learn from others. Having the option to live in a normal apartment setting gives the resident the option to live more independently. Having both options are very important because different people will want different things.

The finished design will be a community of young adults with disabilities who are living in the same building, getting the help they need, and learning the necessary skills to live independently. This project will create a sense of community and place that brings people together that share something in common. Also, this project will help people in need of assistant living and change the serotypes and bad stigmas of assistant living and disabilities.



# The Project Typology

This project's typology is an assisted living apartment for people in need of extra help. The typology is closest to a mixed-use project as well as assistant living home. I want this building to assist young adults who need help with learning life skills as well as how to live on their own. I am currently thinking of creating two buildings, one for temporary use and the other being more of a permanent living situation. I came up with this project to give a place for young adults in need to go to instead of a nursing home or living at home with their parents.

# Typological Research

## Factors Considered

1. **Typology** – Mixed-Use or Assistant Living
2. **Urban Impact** – Project that revitalizes urban renewal within the city or area
3. **Modern Design** – Projects that stand out and look unique

## Case Studies

1. **Valley** – Amsterdam, Netherlands
2. **Block 9** – Fargo, North Dakota
3. **Dr. George W. Davis Senior Residence and Senior Center** - San Francisco, California

All of these case studies were analyzed and researched from the internet to influence the theoretical premise of this thesis. The case studies are studied based on their typology, urban impact, and modern design. These factors are important to what I want this to include as well. Having a modern designed assistant living mixed-use apartment that uses urban renewal. The following pages describe each case study and how it influences the thesis premise.

# Case Study 1

Case Study 1



Figure 1

# Valley

## Summary

The Valley was designed for a 2015 competition located in the Netherlands. In the Zuidas area of Amsterdam has been mainly developed as an international business center, which resulted in a reduced focus on residential interests. This project was created to change this by transforming the area into more of an urban center, by inviting a large number of residents and additional public facilities to the area.

## Basic Information

**Location-** Amsterdam, Netherlands

**Architect-** MVRDV

**Landscape Architect-** Piet Oudolf

**Year-** Currently being built

**Size-** 247,000 ft<sup>2</sup>

**Typology-** Mixed use, Offices, Residential, Cultural, Bar-restaurant

## Project Elements

- Sky-bar
- Offering panoramic views over Amsterdam
- 196 apartments
- Seven stories of offices
- Three-story of underground parking/375 parking spots
- Various retail and cultural facilities
- Terraces and roof gardens

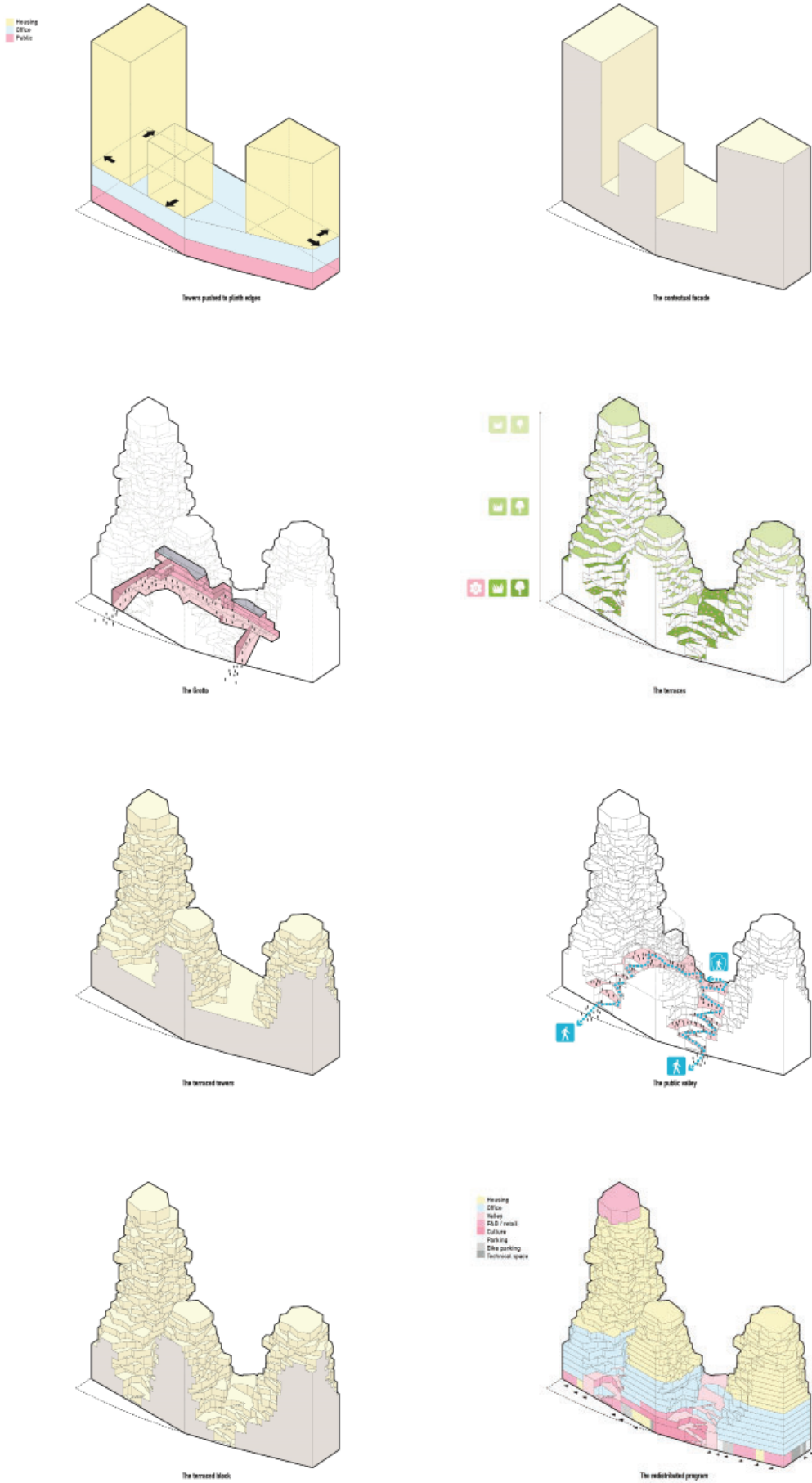


Figure 2-9

## Analysis

**Structure-** The main structure of the building is made of concrete and steel. The other main material used in this project is glass. Valley's exterior façade is mainly made of glass and so are the balconies' rails. In direct contrast to the exterior, the interior façade has rugged stone terraces with large planters covering the building.

**Natural Light-** In my observation, this project has a lot of windows to let in a lot of natural sunlight. The windows are mainly facing towards the west and east as well as the south. The ridged shape of the floors allows for a more south facing window and keeps privacy between neighbors.

**Massing-** From a perspective view, this project looks like three huge piles of stacked flat rocks that have grown some vegetation. Between these rock piles has created a valley pathway for people to walk through. Each floor looks unique and different from the next one and seems to be pushed and pulled differently.

## Conclusion

This project does a really good job at designing around the needs of the area. Having mixed-use, including apartment complexes, offices, restaurants, and extra, creates good urban design practice. I believe this project will revitalize this area and create a better community within it. Also, I appreciate how each floor is very different from other ones and by doing so creating more private areas, creating more ways to get natural sun lights, and making the building look unique and interesting. Lastly, incorporating greenery into the project I think added an extra level to the project.

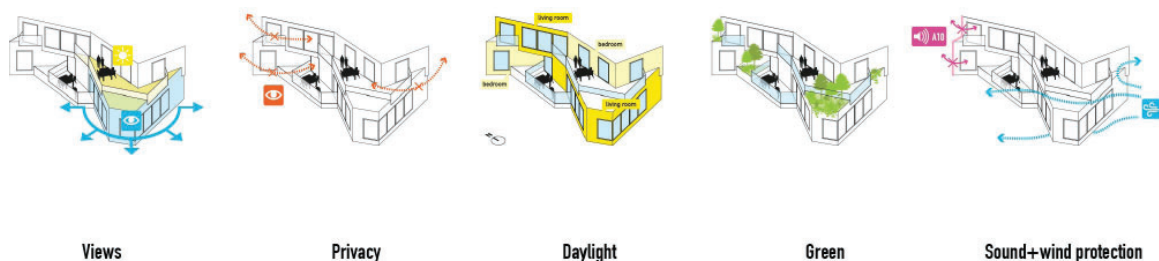


Figure 10

# Case Study 2

Case Study 2



Figure 11

# Block 9

## Summary

This mixed-use project includes five different uses including: offices, retail, hotel rooms, restaurant, and condos. The project was created to revitalize the center of commerce that the Keeney Building and Continental Block once did. This project also includes a programmed public plaza which will invite people to this area. The plaza plans to include seasonal amenities such as a skating rink, splash pad, vendor space, and a band shell for live performances.

## Basic Information

**Location-** Fargo, North Dakota

**Architect-** Kilnourne Group

**Year-** Currently being built

**Size-** 290,000 ft<sup>2</sup>

**Typology-** Mixed use, mid-rise tower

## Project Elements

- Retail
- 125 hotel rooms
- Restaurant
- 7 residential condos
- Public plaza
- Parking ramp



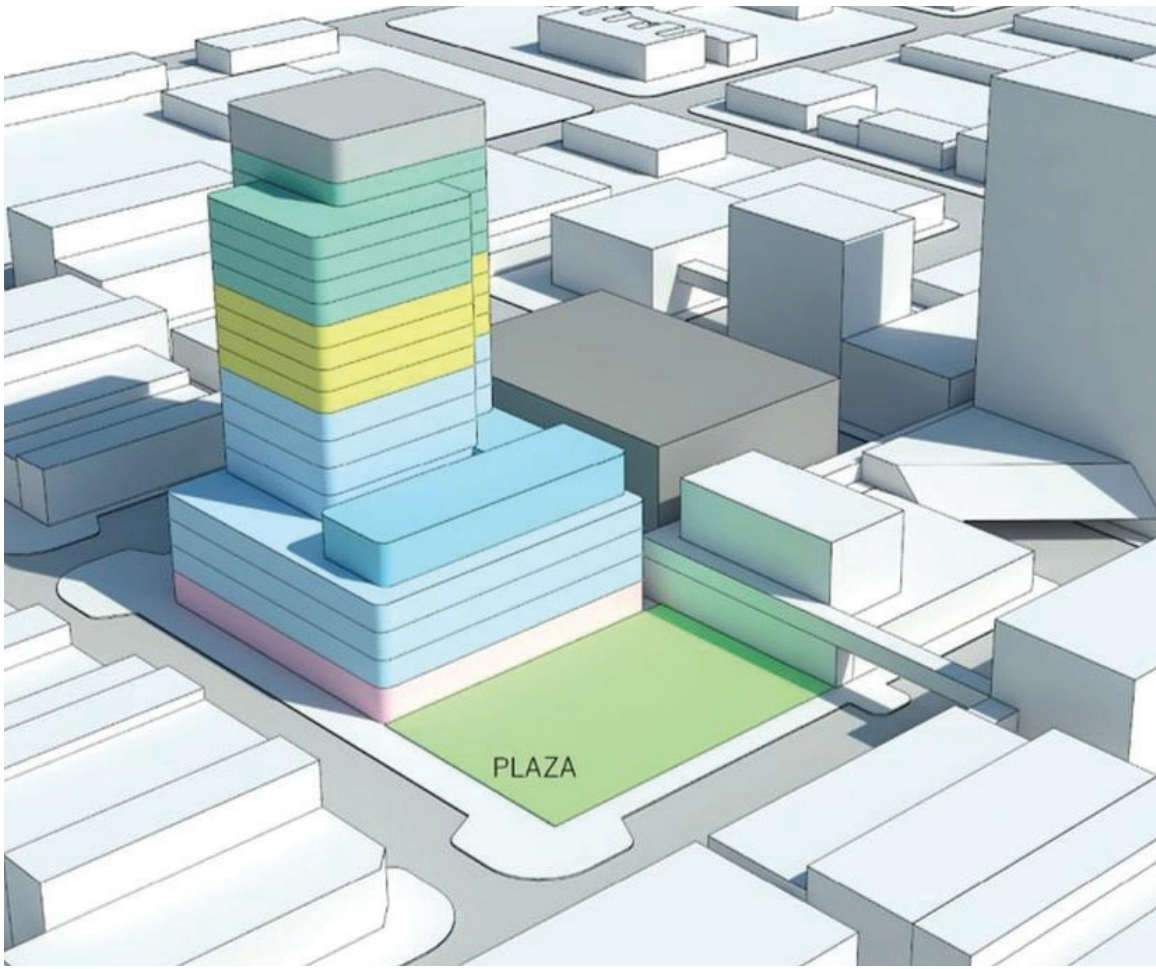


Figure 12-13

## Analysis

**Structure-** The structure of the building is mainly made up of steel and concrete. Some of the building was put together from pre-cast concrete and steel components that were pre-assembled. Some problems that came with this project related to structure, is the ground. Most of the ground is made up of waterlogged clay and gravel. The foundation of this building consists of 367 concrete piers that are 110 feet deep. 19 tons of rebar and more than 300 truckloads of concrete were needed to create the stability for the 18-story building.

**Natural Light-** The building is supposed to have a lot of windows on every side of the building, so I'm positive that it will get plenty of natural sunlight especially on the south side of the building. The plaza will be on the south part of the site, so that area should have plenty of natural light as well.

**Massing-** The shape of the building looks like rectangles stacked on top of each other. Starting off with a bigger and wider one on the bottom. Then having two thinner and tall boxes that are intersecting each other on top of the bigger rectangle. I find this building to be a pretty simple, but beautiful design.

## Conclusion

Even though this project isn't finished I still believe that the plaza will be a popular spot for people to hang out at. This project influences me to try to incorporate some type of landscape design to invite people in the community to come to that area. I live in the downtown area, and it makes me excited to see what the plaza will become. Lastly, having different uses with this project is very interesting to see how that affects the neighborhood of the downtown area of Fargo.



Figure 14

# Case Study 3

Case Study 3



# Dr. George Senior Center

## Summary

This project was designed to build affordable housing, in the san Francisco area, that would support seniors. The building incorporates a wide range of African-inspired design elements. The bustling new center serves as a social hub for seniors to relax and hangout with their neighbors, family, and friends.

## Basic Information

**Location-** San Francisco, California

**Architect-** David Baker + Partners

**Landscape Architect-** Miller Company Landscape Architects

**Year-** 2016

**Size-** 152,351 ft<sup>2</sup>

**Typology-** Affordable housing

## Project Elements

- 121 rental units
- Common areas
- Exercise rooms
- A library
- Beauty salon
- Picnic area



Figure 17



Figure 18

## Analysis

**Structure-** The first floor is made up of a concrete structure. The next four floors above it are a wood construction. Floors with wood construction are covered with different color paneling. An interesting fact about the construction of this building is that the flooring, paint, cement, and the insulation were made from environmentally preferable products with low emissions and recycled contents

**Natural Light-** From looking at the floor plan, most of the sunlight coming into the building will come from the west and east side windows. There are some south facing windows, but not as much as west and east just because of the elongated shape of the building. The building also features a Solar Thermal system and low- e windows. The Solar Thermal system uses the natural sunlight for energy for the building. Having the low- e windows in this area is beneficial, so that the building doesn't get too hot during the summer times, but still lets light in.

**Massing-** This project is designed around the sense of identity of the local community. The building incorporates a wide range of African-inspired design elements including the central tower, earth-toned palette and textured facades, and vegetation. All of these elements are drawn from traditional village structures. The shape of the building from the floor plan looks like a missed shaped M.

## Conclusion

This case study shows me that even a senior center can be a center of a community. I am also impressed that Dr. George W. Davis Senior Residence and Senior Center received LEED for Homes Platinum rating with guidance from Bright Green Strategies. The designers used a lot of sustainable design, and it influences me to make my project just as sustainable or better. This project shows how important a community and sustainable designs are.

# Typological Summary

These three case studies were researched and analyzed to influence and further the development of this thesis. I choose these projects to study because they give insight on the design topics of typology, urban impact, and modern designs. Two of these projects, Valley and Block 9, are currently being built and show new designs for mixed-use buildings typology. Using this information to further the design of this thesis including the layout of the building. The last case study, Dr. George W. Davis Senior Residence and Senior Center, shows a modern design for a nursing home and how it creates a sense of community. All of the case studies are modern designs that have a good urban impact. When finishing the research of each project, my goal is to learn from them and try to incorporate some of the ideas into my thesis.

All three of these projects have some commonalities with one another. All three of them have a big impact on their communities that they are located in. They all create spaces outside the building for people to be and occupy whether that is a public plaza, a walking path, or just a sitting area. This influences my thesis to create spaces similar to these to invite people to the site. Another thing that the projects have in common is they all have mixed uses. Having different uses within the projects gives people in the community more options to choose from. This backs up my theoretical premise of using mixed-use within my project. Something that I noticed with each of the buildings is how it is shaped with its site. Each of the buildings are formed by the shape of the site and uses as much of the space. Taking this information, I think using all of the site in a smart well thought out way will be important to include in my design. Last thing I have noticed that they have in common is that they all use concrete in some way.

Even though these studies have a lot in common, they do have some un commonalities as well. One of the big differences between the projects is their uses. The Valley is mainly residential, Block 9 is mainly hotel, and Dr. George W. Davis Senior and Senior Center is a senior center.

center. Another obvious difference is where each project is located. Another big difference between them is the senior center is LEED certified and the others are not. This difference influences this thesis to strive for a more sustainable design as well as incorporate green design.

The case studies influenced the premise of this thesis in the terms of mixed-use, community spaces outside the building, and green design. All the case studies have some type of mixed-use which influences the thesis even more to create other uses within my project rather than just residential. Having a community space on my site seems way more important now seeing the plaza on Block 9. The last conceptual idea that I got from the case studies was to strive for LEED certification.

Some of the projects provided some information on environmental, social, and cultural aspects. The senior center and Valley were the two projects that had the most environmental impact out of the three. Clearly Dr. George W. Davis Senior Residence and Senior Center had the most impact because of it being LEED certified and adding plant life to the project. Valley also included some plants on the balconies. Each case study, when it comes to the social aspect, created spaces for people to be and to interact with each other. Dr. George W. Davis Senior Residence and Senior Center was one of the big case studies where I found information about the cultural aspect of the project. The project was created to support the Southern Black communities and for the elderly.

Special and functional relationships with each case study was different with each project, but they all used as much of the sites as possible. For all of the buildings, the form of them was mostly shaped by the site that they were on. This informs my building to do the same to maximize the space of the site. For the functional relationships within the building made sense to me and informs this thesis where things should be located within the building.

While doing these case studies, it confirmed a lot of my ideas that I had about my thesis, but they also influenced me to do more with my project. As to be expected, most of the information found was very helpful and insightful to what needs to be included in this thesis. The information that I got from these projects will influence this thesis and design.



# Major Project Elements

## Living Area

### Apartment Rooms

These living spaces will be one and two-bedrooms apartment rooms. The rooms will be designed around different disabilities to make it easier for the residents to use. Rooms might vary depending on what disabilities or all will be the same to function with all disabilities.

### Community Areas

Having spaces for people to go to hang out with others. This is important because social interaction is necessary within a community. This can include amenities like a small gym/work out space.

## Assisted Living

### Assisted Living Workers Room

The assisted living workers will need a room for their own to put their things as well to take a break or to be on standby.

### Therapy/Therapist room

Having a room for the residents to feel safe and to open up to their therapist within the apartment complex.

### Classrooms

Creating classrooms to teach the residents life skills to live on their own.

## **Outside**

### **Landscaping**

If possible, giving an area for the residents to enjoy being outside and getting fresh air.

### **Transportation**

Having a way for the residents to get around. Making a bus stop in front of the apartments.

### **Parking**

An area for the residents to park their vehicles.

## **Other Building Elements**

### **Restaurant/Commercial Use**

Having mixed use on the first floor will create a better urban design as well create a community in the area. While also creating job opportunities for the residents.

### **Rental Office**

A room for the lessee to work in to rent the apartment complexes.

### **Closet**

For the cleaning crew and maintenance workers to put their tools in.

# User & Client Description

## **Residents**

Young adults with disabilities who need assisted living or in need of learning life skills.

## **Customers**

People who are using the mixed-use or people using the public spaces.

## **Assistant Living workers**

Workers who help the residents with day to day needs.

## **Therapist**

Will be in the apartment to evaluate, diagnose, and treat the residents emotional and or mental disorders.

## **Teacher(s)**

Help teach the residents life skills to live on their own.

## **Restaurant or other mixed-use workers**

People working on the first floor which will be commercial use.

## **Lessee**

There to rent the rooms to the residents.

## **Cleaners**

There to clean the hallways and community spaces.

## **Maintenance Worker**

To fix and maintain the apartment complex.

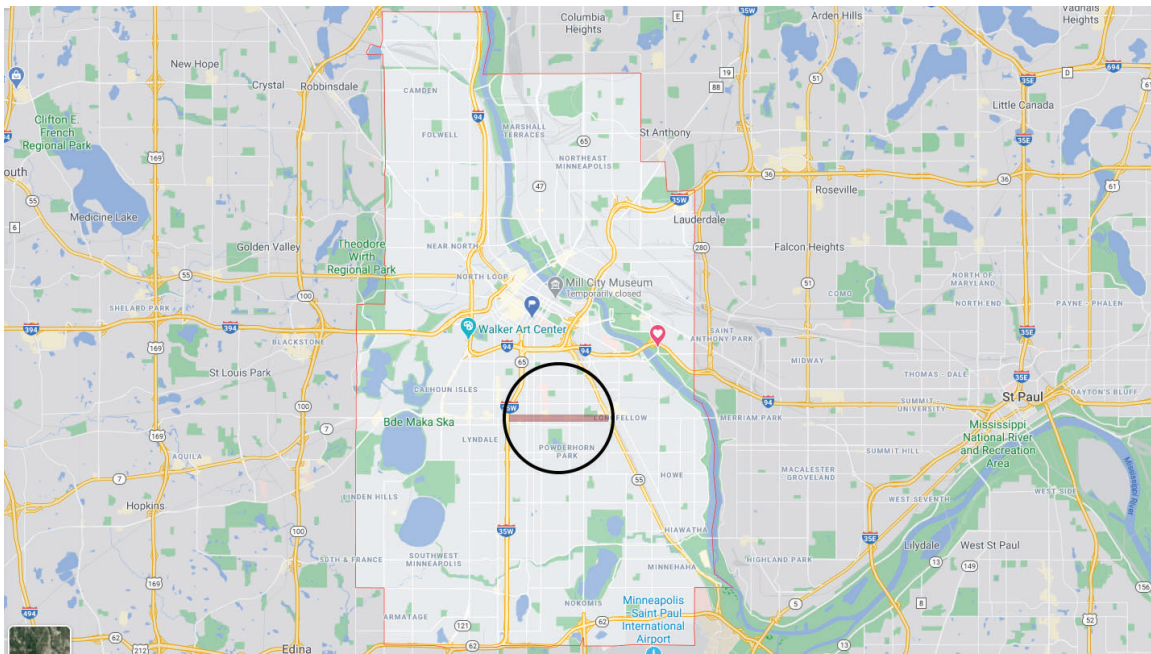
## **Yard worker**

If need, to mow the lawn and take care of the landscaping.

# The Site

**Site:** On E Lake Street between Highway 55 and 35W

For this project, I am designing for people with disabilities. In Minnesota, the county with the highest number of people with disabilities is in Hennepin county. Since Minneapolis is in Hennepin county, I wanted my site to be there. Other considerations that I made when looking for a site was it had to be on a street with commercial use and I wanted it to be somewhat close to green spaces. I decided that I want to create my project somewhere on E Lake Street between Highway 55 and 35W because I think it is a perfect spot for a mixed-use apartment building. Also having Abbott Northwest Hospital very close by works well with my project type because if the residents need emergency help that the assisted living works can't give them, a hospital is close by. Powderhorn Park is close by too, If I am not able to create some green space on my site.



The Site

Figure 19

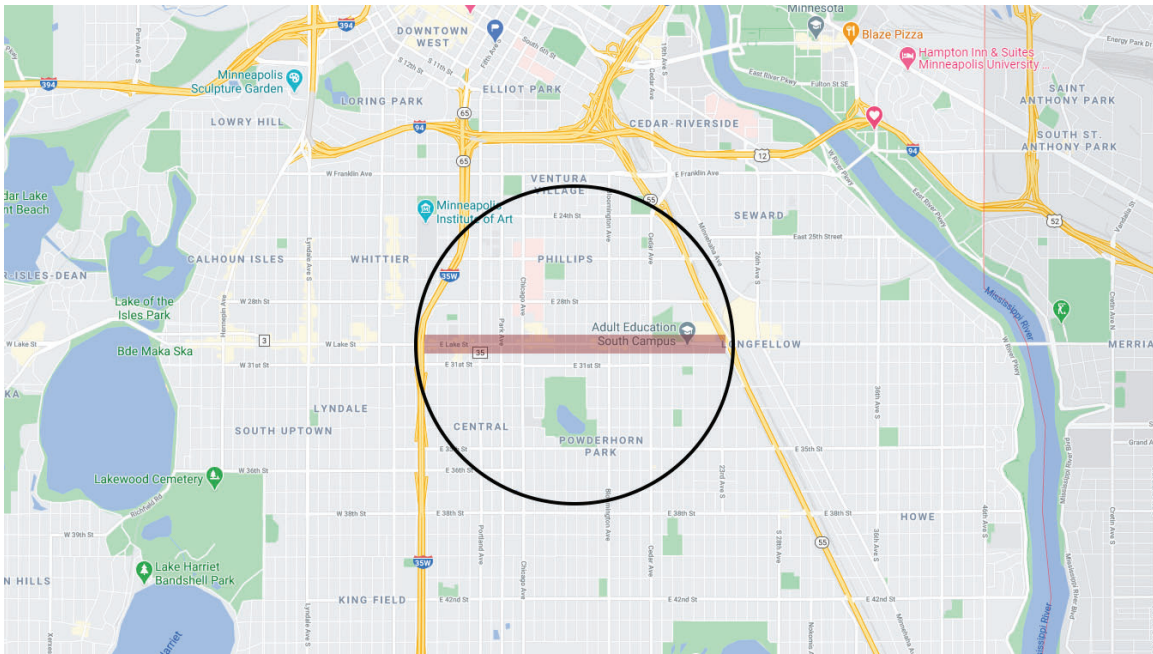


Figure 20-21

# The Project Emphasis

## Designing Using ADA Codes

Designing around ADA codes so the residents are comfortable with their living situation. Using the ADA codes for this project is also very important because the resident who live here will most likely have some type of disability. Designing above ADA codes will be important to not just do the minimum.

## Creating Living Spaces for Young Adults with Disabilities

### A. Communal Living Spaces

Creating a communal living space will give the residents a more community way to live. Creating spaces for others to socialize and interact with each other. This option will be great for people who don't want to live by themselves and want to be a part of a group of people, but still have their own room and space.

### B. Apartment Living Spaces

Having an apartment living situation gives the resident the option to be more independent, but still getting assistance. There will be options for one bedroom and two bedroom apartments.

## **Health and Wellness**

### **A. Fun Community**

With the project being an assistant living mixed-use apartment complex for young adults with disabilities, I don't want the apartment to be depressing or sad. So, I want the community to be a fun uplifting community. I think having community areas for activities and places for the residents to interact will create a fun environment to live in. As well as having mixed use on the first floor will create a better community within the area.

### **B. A Welcoming place**

Having the first floor being mixed use, I hope to create a welcoming place for the residents, workers, and users.

## **Making it More Affordable**

Creating jobs for the residents with the commercial use on the first floor. Giving the residents a chance to create revenue to sustain living in the apartments and pay for the help they need.

# Goals for Project

## **1. Coming up with a Better Solution**

Academically, I want to create a better solution than nursing homes for young adults. I want to give more options for people with disabilities and give them the tools to live on their own.

## **2. Using Codes**

Academically, I want to learn and use codes for this project, especially ADA codes.

## **3. Intentional Design**

Professionally, when designing I want to design things intentionally and think about everything I create.

## **4. Design for People**

Professionally, creating spaces for people to thrive in and creating a sense of community is important for society as well as urban design.

## **5. Making My Project Stand Out**

Personally, I want my project to be memorable to others and hopefully make an impact.

## **6. Using Computer Programs to My Best of My Ability**

Personally, when designing I want to use Revit and other programs to convey my ideas and hopefully learn how to use them better.

## **7. Create a Project I Am Proud of**

Personally, I want my end product to be something I am proud of.

## **8. Getting 8 Hours of Sleep Every Night**

Personally, I would like to get at least 8 hours of sleep every night.



# A Plan for Proceeding

## Research Direction

### Theoretical Premise/Unifying Idea

1. Precedents in assisted living for people with disabilities
2. Precedents in mixed-use special organization and materials
3. Identifying urban renewal strategies
4. Identifying successful community spaces

### Project Typology

1. Identifying needs for people with disabilities
2. Identifying what mixed-use will be within the project

### Historical Context

1. How do cultural/social issues affect assisted living?
2. Precedents in successful diverse communities.

### Site Analysis

1. All site analysis needs to be completed.
2. Where to locate my building(s).

### Programmatic Requirements

1. Similarities and differences between communal living and apartment living.

## Design Methodology

### System of Methods

1. Unifying Idea
2. Research on the topics of premise to help answer related questions and use that information for new design solutions
3. Testing design solutions
4. Formulation of own design opinions
5. Formulate those opinions into a conclusion to be used in your design

## Types of Analysis

**Quantitative Analysis** – Interpret data and information through investigation and use that to inform design.

**Qualitative Analysis** – Does the conclusion formulated from opinion meet the goals and values of the clients and community?

**Exploration** – Study how the quantitative and qualitative information can influence the design process.

## Documentation of the Design Process

### Documentation Compilation

Tools for creating documentation:

1. Investigating through computer design software – Revit, Rhino
2. By hand – Sketching, Modeling
3. Representing through computer design software – Illustrator, Photoshop, Indesign

### Design Preservation

1. Creating and investigating the represented drawing and models
2. Use advisors' feedback to improve design
3. Record and preserve hand sketches and notes
4. Research materials and keep list of sources
5. Backup files on a flash drive
6. Update thesis book weekly

### Content Publication

Final content will be recorded and credited in the final thesis book which will be available in the NDSU Repository or in person as a hard copy

### Presentation intentions

1. PowerPoint Presentation to walk through the process of the design
2. Presentation boards containing final design
3. Final Model

This thesis is currently being designed during Covid-19 and if there isn't an option to do the presentations in person, then presentation boards are less likely to happen.

# Interval of Collection

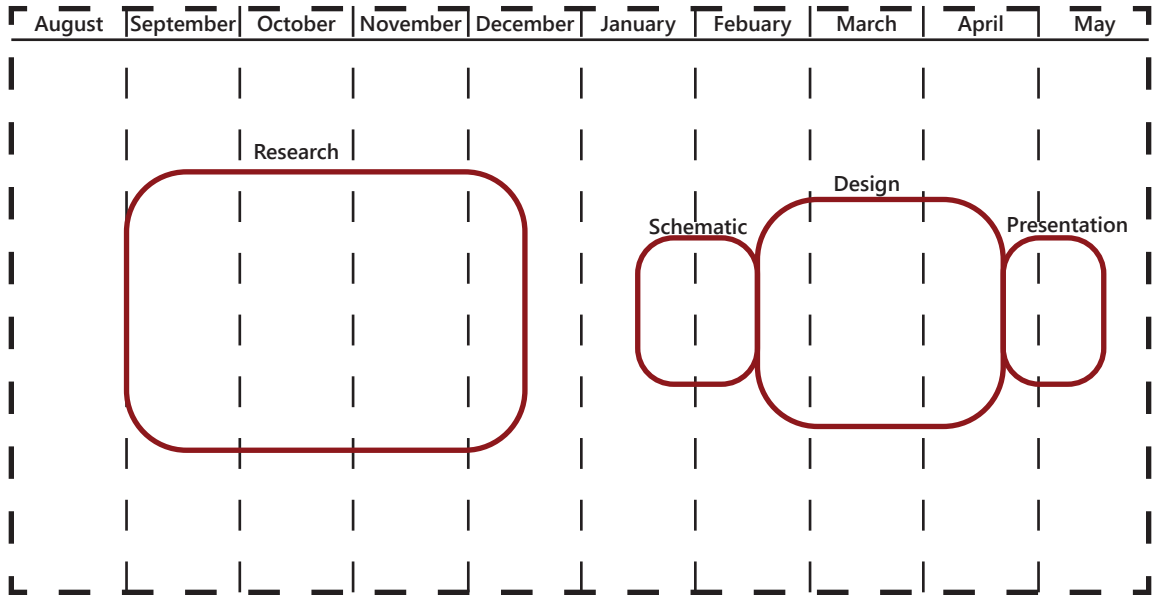
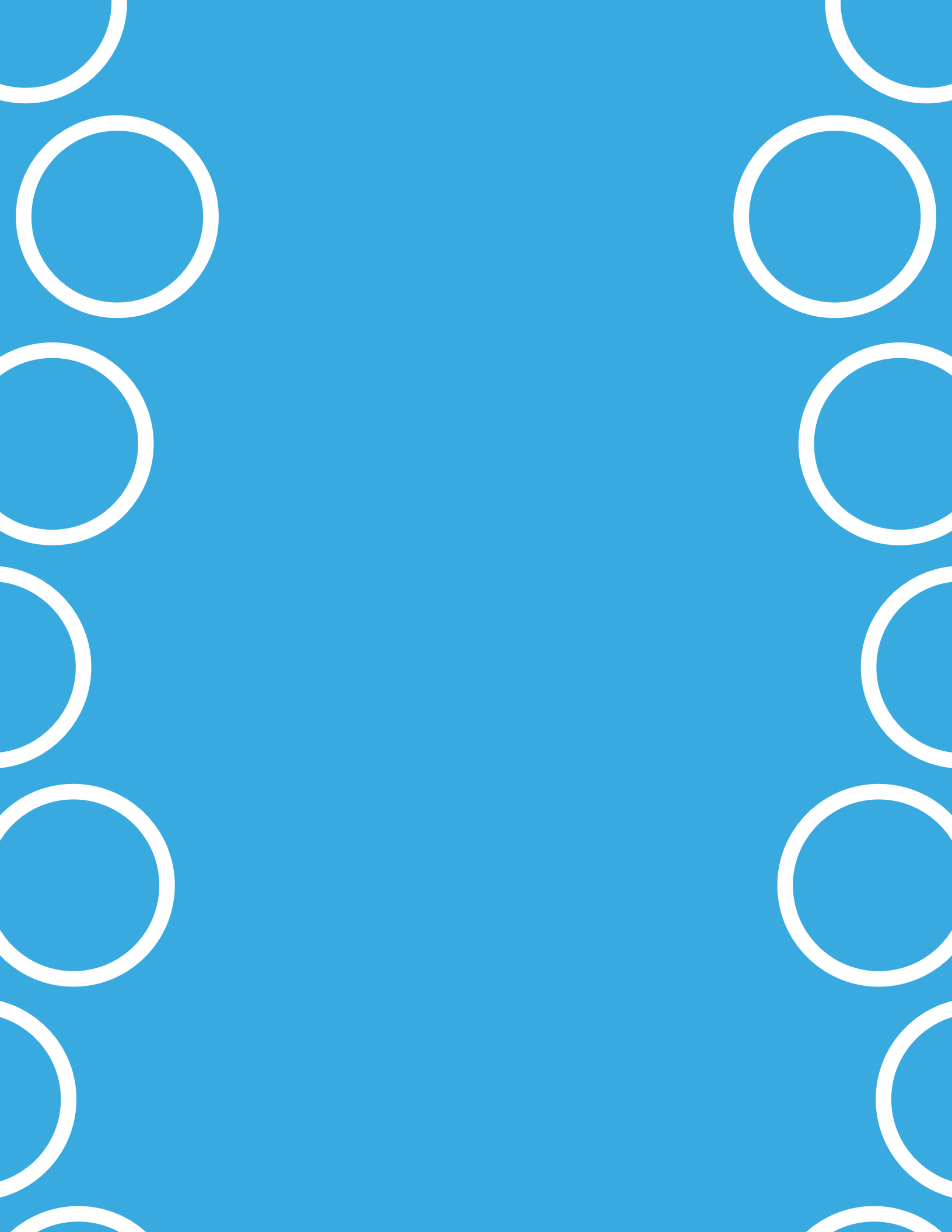
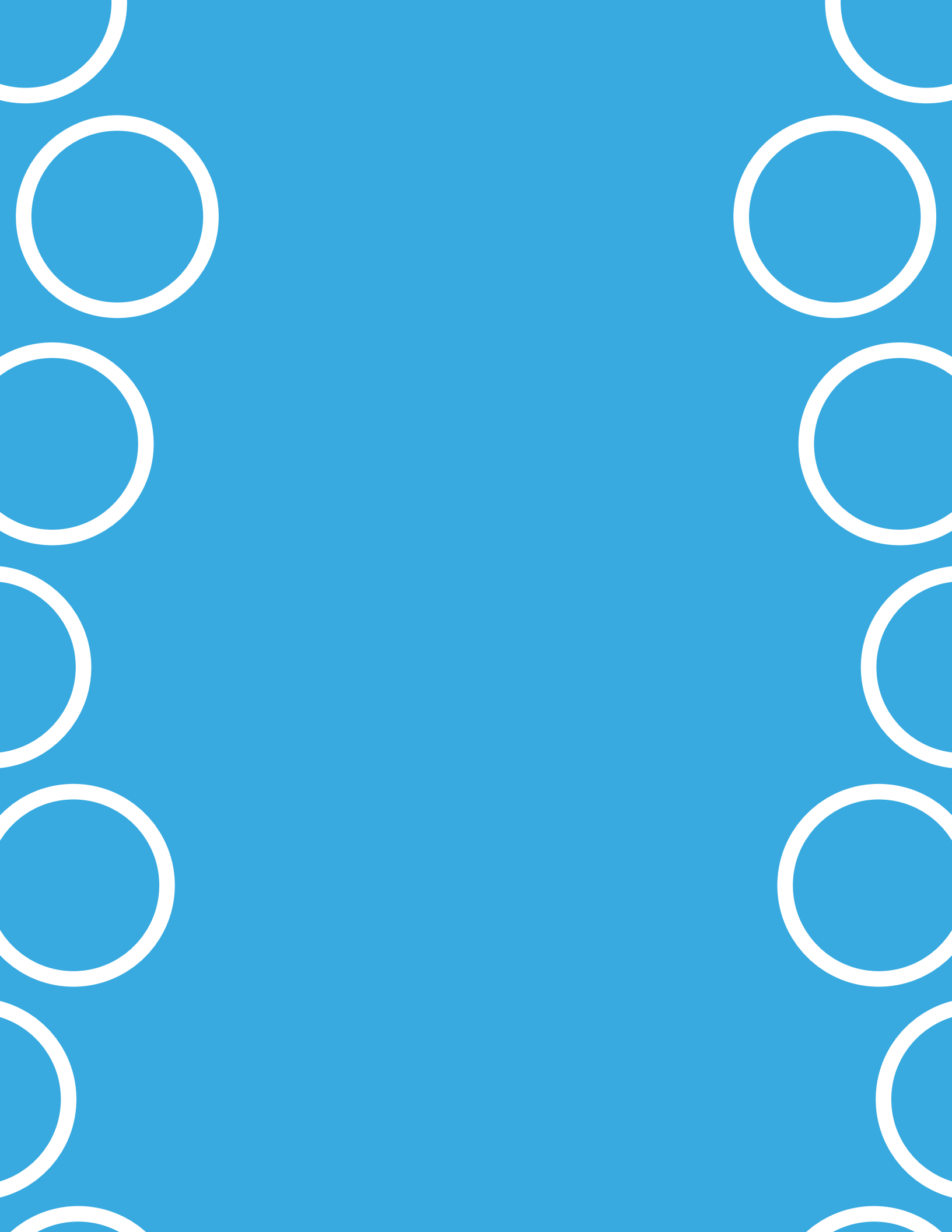


Figure 22



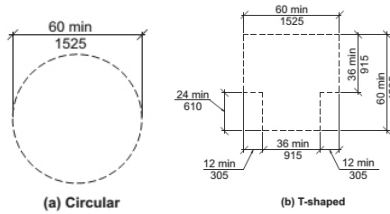
# Thesis Program



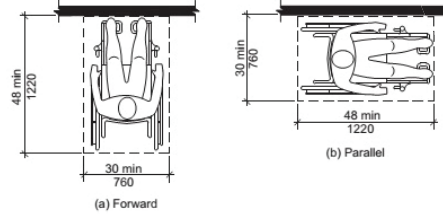
# ADA Codes

## Chapter 3 Building Blocks

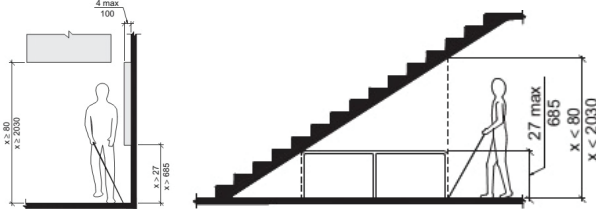
### -Section 304 Turning Space



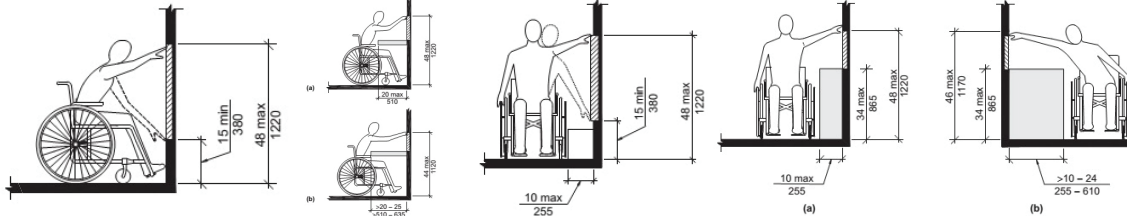
### -Section 305 Clear Floor Space



### -Section 307 Protruding Object



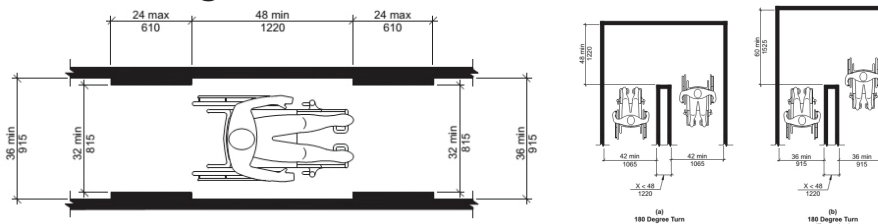
### -Section 308 Reach Range



## Chapter 4 Accessible Routes

-Section 402 Accessible Routes - walking surfaces with a slope not steeper than 1:20

-Section 403 Walking Surfaces



### -Section 404 Door and Doorways

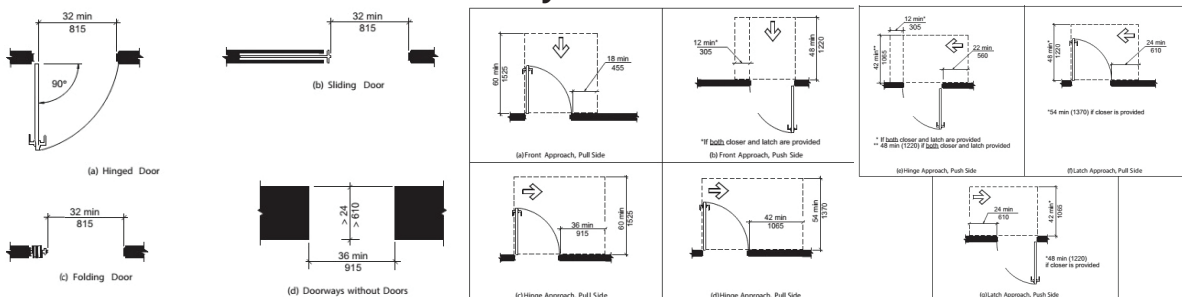


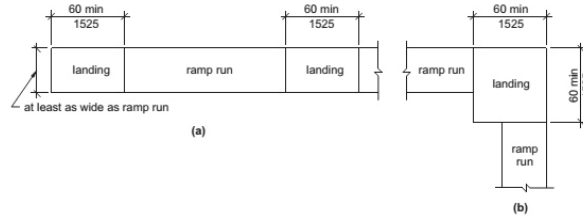
Figure 22-37

**-Section 405 Ramps**

**405.2 Slope** - Slope steeper than 1:10 but not steeper than 1:8 and maximum rise is 3 inches. Slope steeper than 1:12 but not steeper than 1:10 and maximum rise of 6 inches.

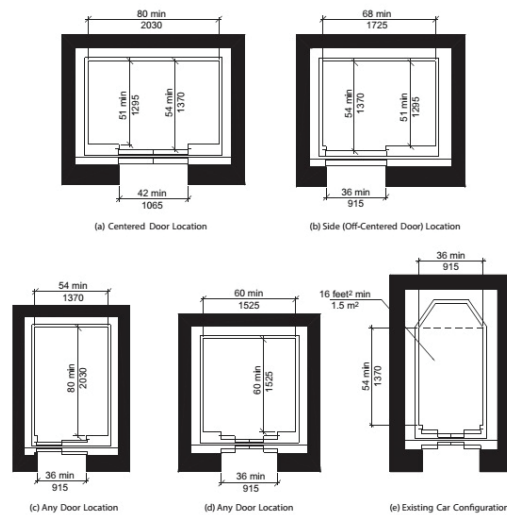
**405.5 Clear width** - Ramp width shall be 36 inches minimum.

**405.6 Rise** - The rise of any ramp run shall be 30 inches maximum.



**-Section 407 Elevators**

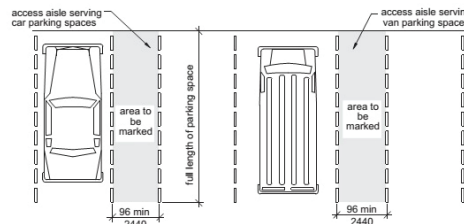
Control Button Type	Raised Symbol	Braille Message	Proportions (Open circles indicate unused dots within each braille cell)
 3.0 mm TYP. BETWEEN ELEMENTS 16.0 mm 4.8 mm DOOR OPEN		op'ner	 3.0 mm 2.0 mm
 REAR/SIDE DOOR OPEN		op'ner	
 DOOR CLOSE		close	
 REAR/SIDE DOOR CLOSE		close	
 MAIN		main	
 ALARM		al'arm	
 PHONE		ph'one	
 EMERGENCY STOP (ONE PROVIDED) X on face of octagon is not required to be tactile		stop	



**Chapter 5 General Site and Building Elements**

**-Section 502 Parking Spaces**

**502.2 Vehicle space size** - Car and van parking spaces shall be 96 inches minimum in width.



**502.6 Vertical clearance** - A vertical clearance of 98 inches minimum shall be provided at the following locations:

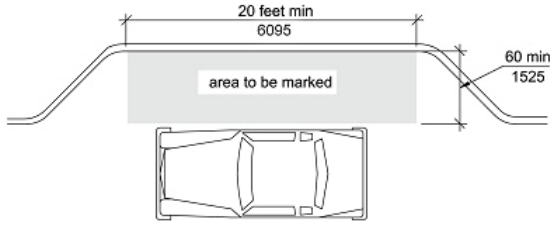
1. Parking spaces for vans.
2. The access aisles serving parking spaces for vans.
3. The vehicular routes serving parking spaces for vans.

Figure 38-41



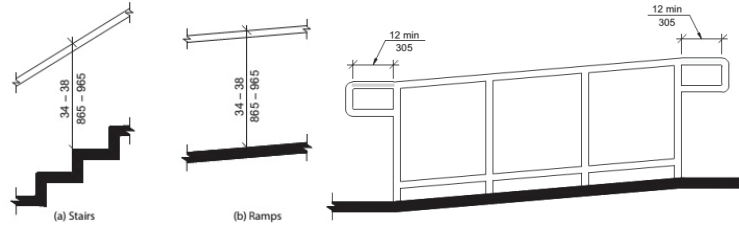
-Section 503 Passenger Loading Zones

503.2 Vehicle pull-up space size - Passenger loading zones shall provide a vehicular pull-up space 96 inches minimum in width and 20 feet minimum in length.



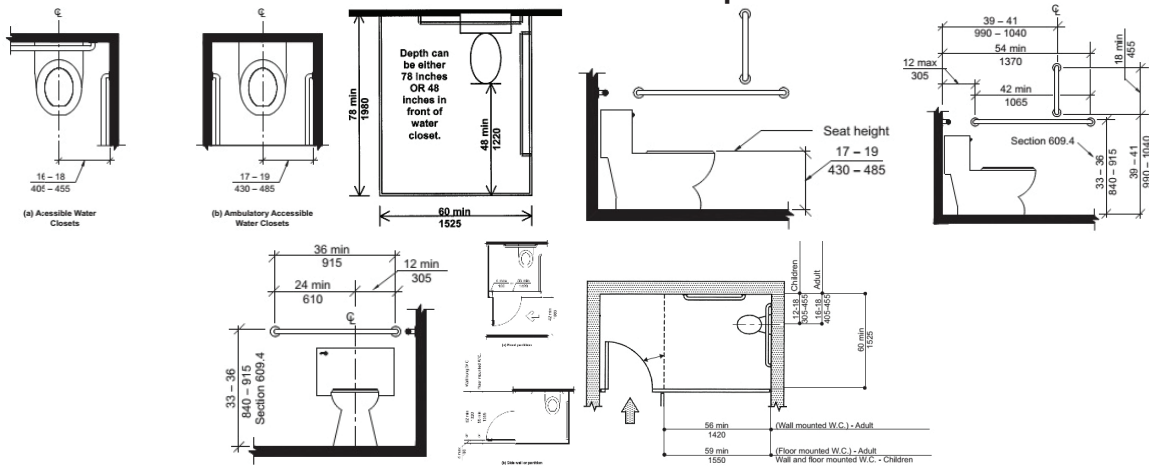
-Section 505 Handrails

505.2 Location - Handrails shall be provided on both sides of stairs and ramps.

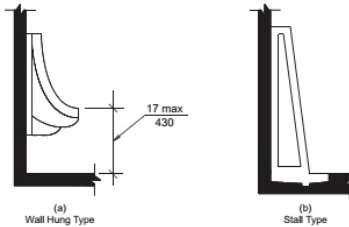


Chapter 6 Plumbing Elements and Facilities

-Section 604 Water Closets and Toilet Compartments



-Section 605 Urinals



-Section 606 Lavatories and Sinks

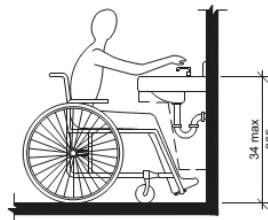
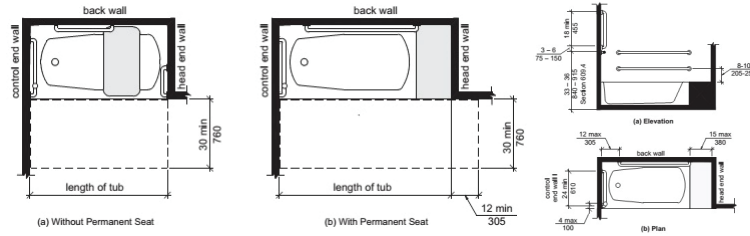
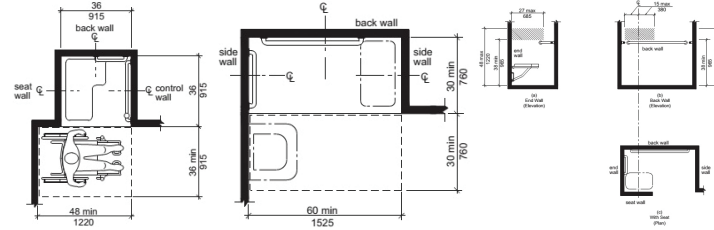


Figure 42-52

-Section 607 Bathtubs



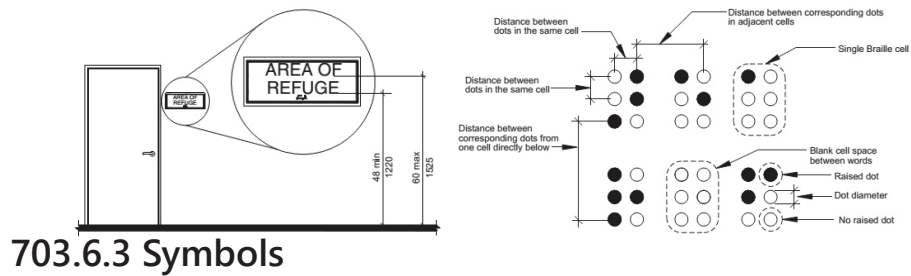
-Section 608 Shower Compartments



Chapter 7 Communication Elements

-Section 703 Signs

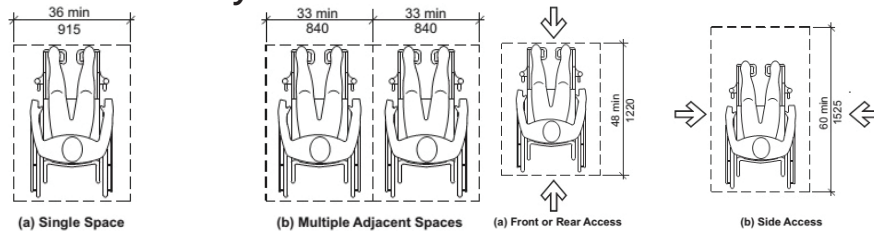
703.3 Raised Characters



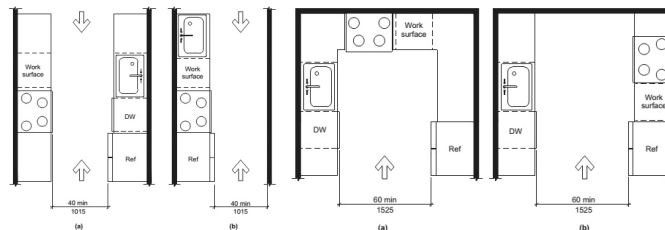
703.6.3 Symbols

Chapter 8 Special Rooms and Spaces

-Section 802 Assembly Areas



-Section 804 Kitchens and Kitchenettes

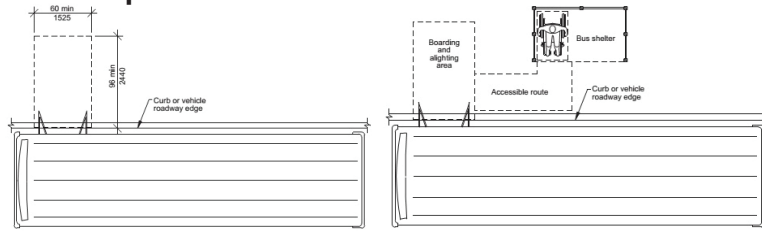


804.5.3 Dishwasher - A clear floor space positioned adjacent to the dishwasher door, shall be provided. The dishwasher door in the open position shall not obstruct the clear floor space for the dishwasher or an adjacent sink.

Figure 53-63

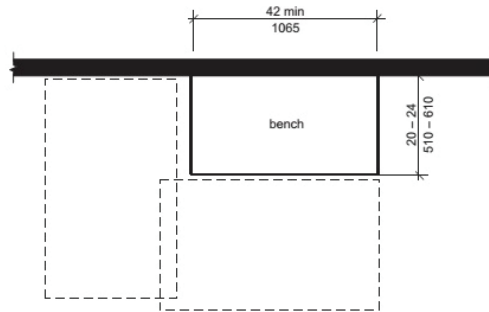
804.5.6 Refrigerator/freezer

-Section 805 Transportation Facilities

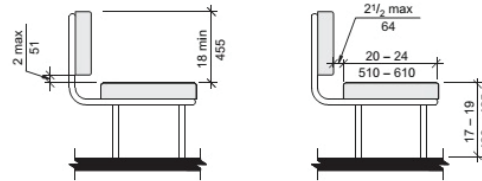


Chapter 9 Built-In Furnishings and Equipment

-Section 903 Benches



(a) Bench Size and Options for Clear Floor Space



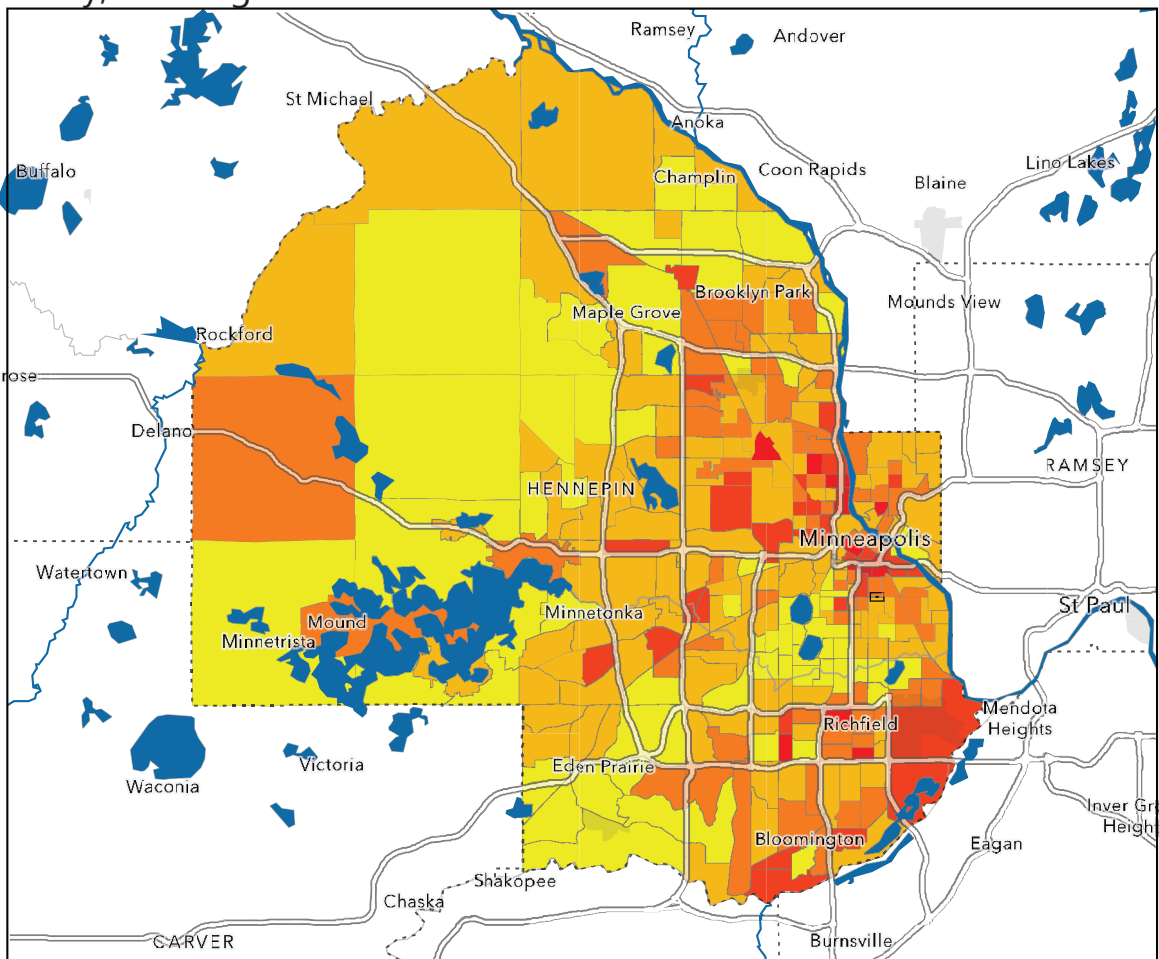
(b) Bench Back Support and Seat Height

Figure 64-66

# Percentage Map

## Disability Data From American Community Survey

The map below shows the percentage of people in that area who have some type of disability in Hennepin County. Like I stated before, Hennepin County has the highest number of people with disabilities in Minnesota. Within this county, the cities with the highest percentage of people with disabilities are Minneapolis, Richfield, Bloomington, and Brooklyn Park. It looks like the higher percentage is on the east side rather than on the west side of Hennepin County. The next pages will show the percentage of people with vision, hearing, ambulatory, and cognitive disabilities.



□ Site

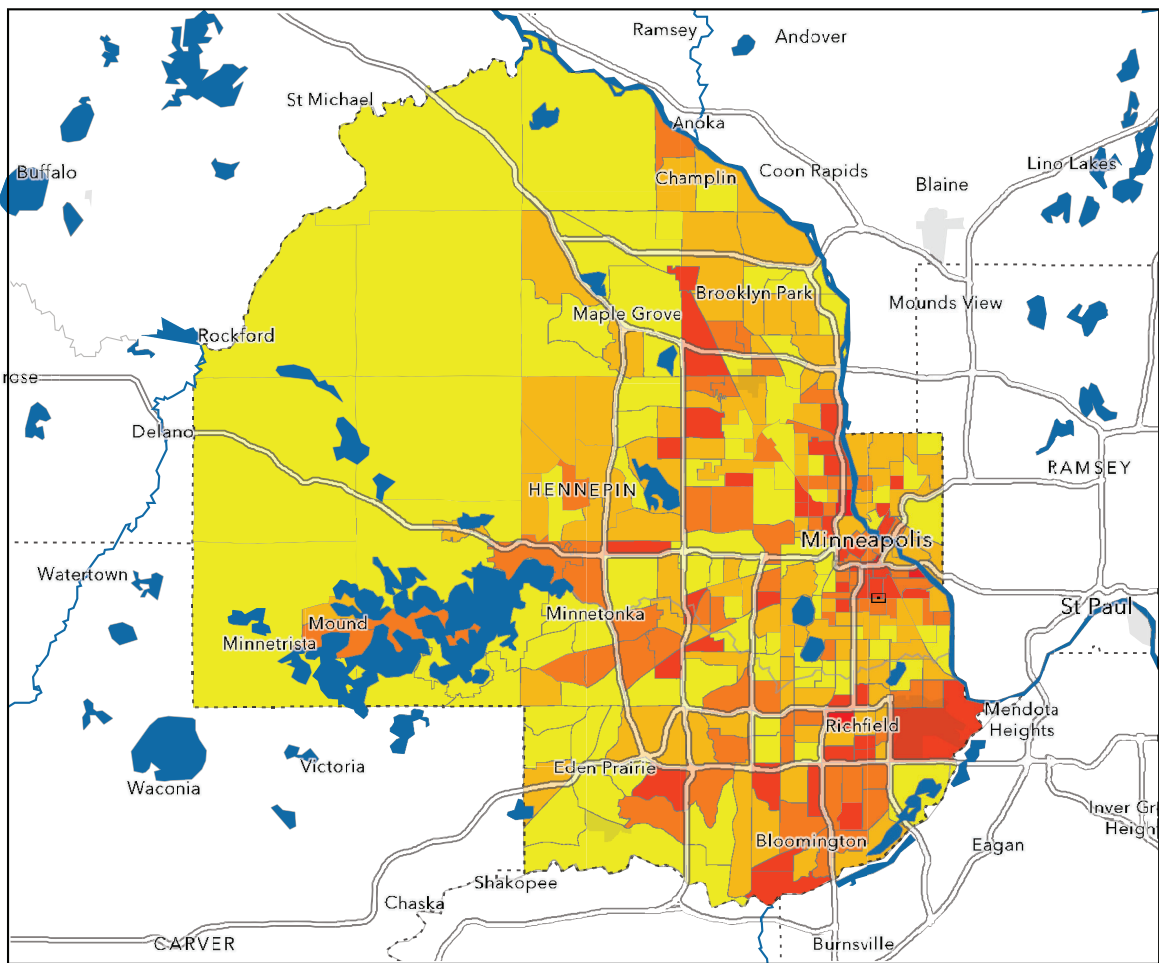
### People with any Disability

- Less than 7.2%
- 7.3% - 10.8%
- 10.9% - 14.8%
- 14.9% - 20.0%
- 20.1% - 39.9%

Figure 67

## Disability Data From American Community Survey

This map displays the percentage of people with a vision related disability. Having a vision related disability is those who are blind or having serious difficulty seeing. On this map, the west side is mostly made of less than .8% of people have a vision related disability. It seems to stay consistent with the last map.



□ Site

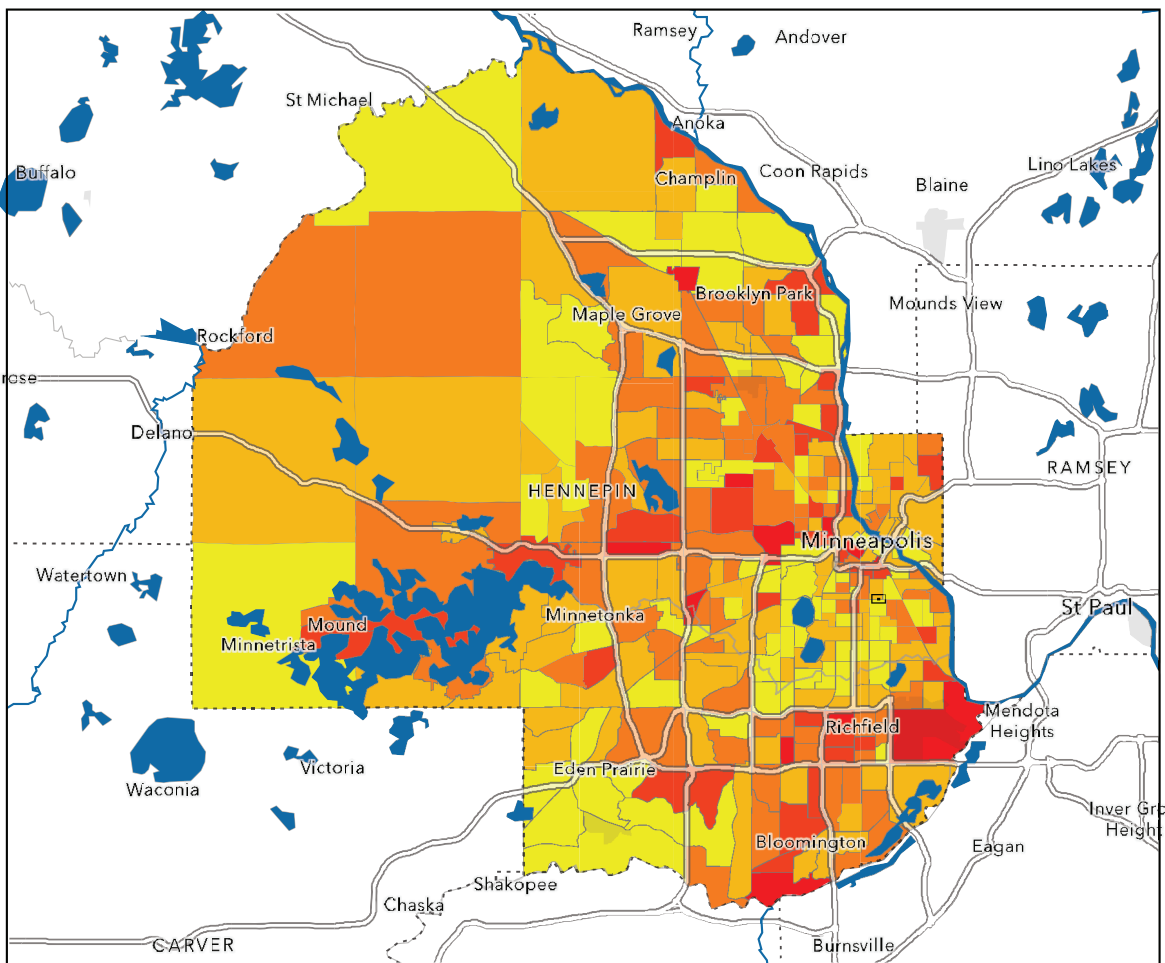
### People with a Vision Related Disability

- Less than 0.8%
- 0.9% - 1.7%
- 1.8% - 3.0%
- 3.1% - 5.4%
- 5.5% - 9.8%

Figure 68

## Disability Data From American Community Survey

For this map it shows the percentage of people with a hearing disability. When it comes to hearing disability it is people who are deaf or having serious difficulty hearing. For this map, it looks a lot different from the past maps. Looks like there are a lot more hearing disabilities to the west than there are of other disabilities. Also from looking at this map, it looks like Richfield and Bloomington has a higher percentage of people with hearing disabilities.



Site

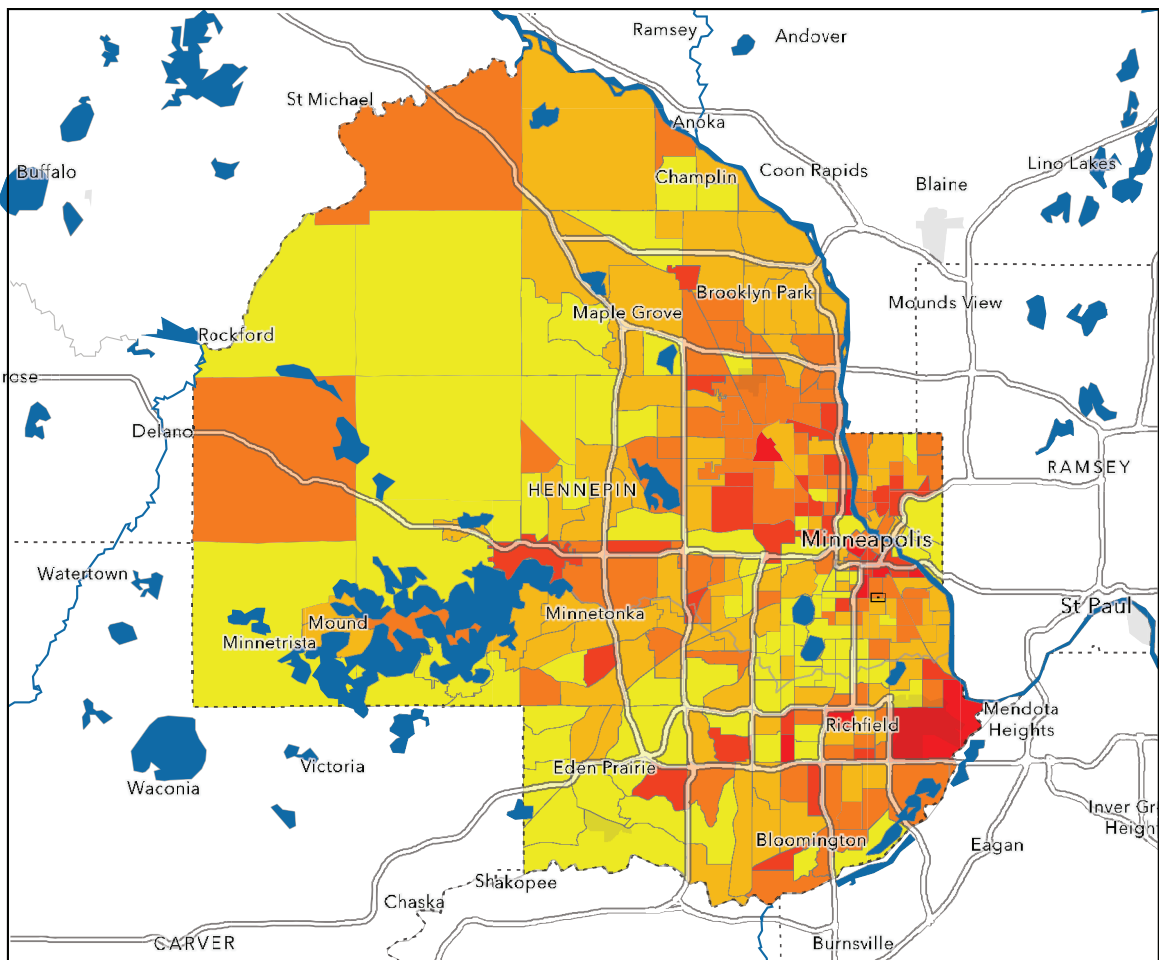
### People with a Hearing Difficulty

- Less than 1.8%
- 1.9% - 2.9%
- 3.0% - 4.2%
- 4.3% - 5.9%
- 6.0% - 8.8%

Figure 69

## Disability Data From American Community Survey

On this map it shows the percentage of people with an ambulatory disability. Ambulatory disability is people who have difficulty walking or climbing stairs. This map looks pretty consistent to the first map. Looks like the higher percentage is on the south side of Hennepin County.



□ Site

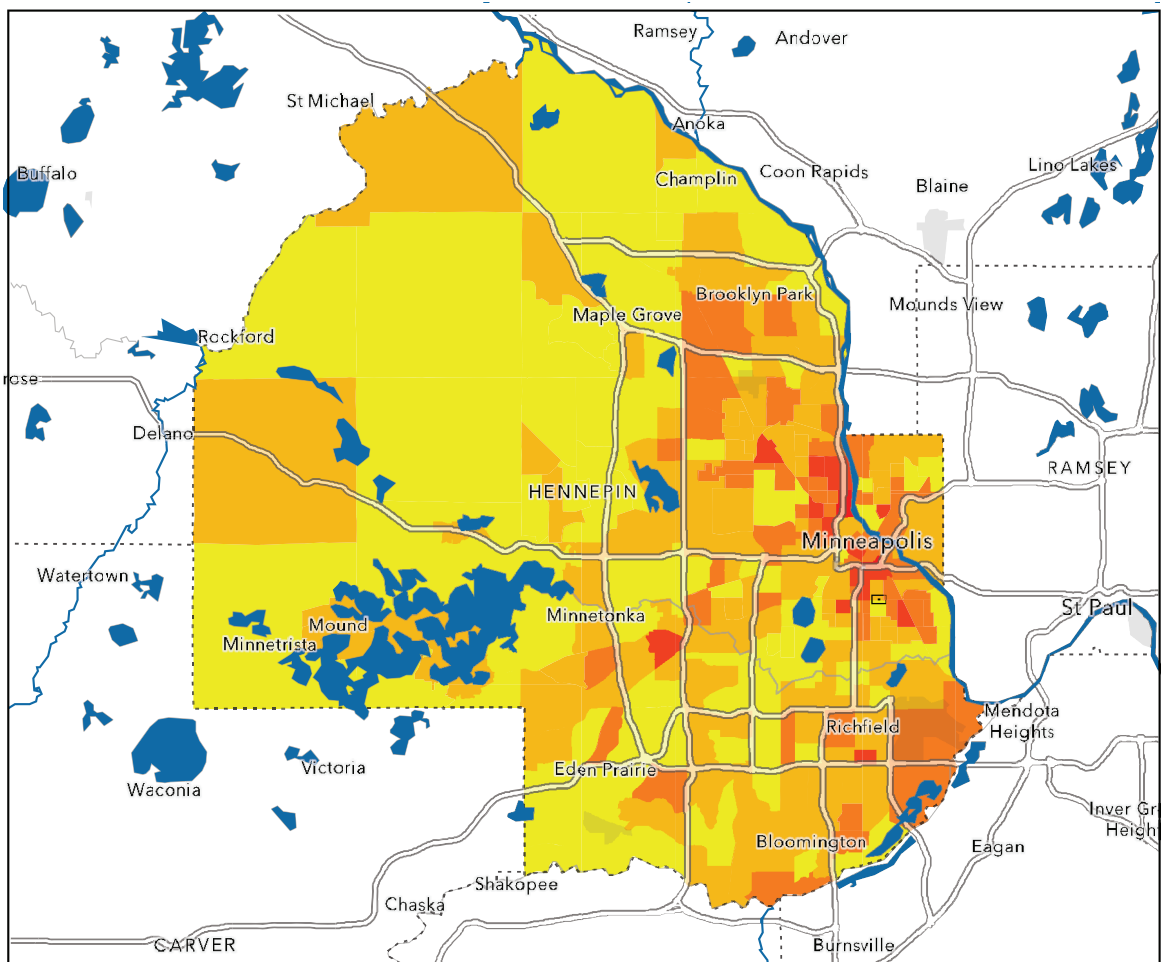
### People with an Ambulatory Disability

- Less than 2.8%
- 2.9% - 4.7%
- 4.8% - 7.2%
- 7.3% - 11.4%
- 11.5% - 22.0%

Figure 70

## Disability Data From American Community Survey

This map displays the percentage of people with a cognitive disability. A cognitive disability is defined as a physical, mental, or emotional problem, those who have difficulty remembering, concentrating, or making decisions. From looking at this map, it looks completely different from the past ones. It has a lot more yellow than the darker reds and oranges. Also the percentage is up a lot more compared to the other maps, so there are still a lot of people with a cognitive disability.



□ Site

### People with a Cognitive Disability

- 0% – 3.1%
- 3.2% – 5.7%
- 5.8% – 9.3%
- 9.4 – 15.6%
- 15.7% – 28.7%

Figure 71



# Literature Reviews

## The Death and Life of Great American Cities

*The Death and Life of Great American Cities* is a book written by Jane Jacobs who is an activist with expertise in urban history. The title references the death and life of cities which the death is from the current urban design and the life being what needs to be changed within cities. This book explores Jacob's concerns with the problems with city planning and the strategies they used. Jacob explains what is needed to make a city function well and also suggest ideas to make cities better and to make them grow.

There are four parts within this book focusing on different parts of a city. The four different parts being: The Peculiar Nature of Cities, The Conditions for City Diversity, Forces of Decline and Regeneration, and Different Tactics. This book also includes an introduction where Jacobs starts off by attacking city planning and rebuilding of cities. She also goes into saying that there is a myth that if only that had enough money that they could get rid of the slum and solve all the problems when billions have gone into low-income projects and have been worse with the slums they replaced. Another problem she points out is cars. Jacobs says that cars are much less a cause than a symptom of our incompetence at city building. She continues by positioning herself against orthodox city planners.

Part 1, "The Peculiar Nature of Cities," focuses on the use of sidewalks including safety, contact, and assimilating children. This part also focuses on neighborhoods and parks. This part starts off by saying that streets and sidewalks are used for other purposes other than just for cars and people. They function as boundaries or borders between buildings. Sidewalks and streets are one of the most important parts of a city. When people stop using a street or a sidewalk less it is then considered an unsafe street. This is considered bad because sidewalks serve as a social function. They are places for people to meet up and socialize. Sidewalks are places for public contact and interaction, which are key to building community trust. If there is an absence of this trust it is considered by Jacobs to be a disaster for the city streets and sidewalks. Another problem she points out is to get children off the streets and into playgrounds or other areas. This is a big

problem because there are less people watching this area rather than on the streets which makes parks less safe than streets. She continues this topic by talking about city parks. Jacobs explains that parks may or may not be successful, depending on their usage where it is located. Like stated before if parks aren't used, that means less people are watching which makes the park less safe and become dangerous, which in return can make the streets that border it dangerous too. It is also important to have the parks used at all hours of the day. Lastly Jacobs talks about city neighborhoods and what makes them successful or not. She describes neighborhoods as organs of self-government and self-management that require active participation from their dwellers for success.

Part 2, "The Conditions for City Diversity," addresses the generators of diversity and some myths about diversity, the need for primary mixed uses, small blocks, aged buildings, and concentrations. It starts off by saying that cities are diverse in nature. Diversity in this term means a mixture and combination of different uses. Jacobs says there are four conditions that are necessary for the existence of diversity which is the need for primary mixed use, small blocks, aged buildings, and concentrations. If any of these are absent, it frustrates a district's potential. So for the first condition, being the need for mixed uses, districts have to have more than one purpose. If a building has different uses that means different people will be on the streets at different times of the day, which includes day and night, to provide eyes on the streets to make them safer. That leads to the second condition, which is the need for small blocks. A successful city has small blocks so people have the option to turn when they want. If you aren't able to turn the street is isolated, people on them feel stranded, and the street is then used less. The third condition is the need for different ages of buildings from new to old. Having a mix of both old and new buildings balances out the economy within the city with the new buildings having higher rent and the older buildings with lower rent. Lastly the need for concentration is the fourth condition. This is the population density of a city and visitors. Jacob describes that just because a city has a high population densities doesn't mean that it will create slums, but overcrowding can. High-density areas promote vibrant, visible city life. All four of these conditions are needed to create a successful city.

Part 3, "Forces of Decline and Regeneration," talks about the self-destruction of diversity, the curse of border vacuums, unslumming and slumming, and gradual money and cataclysmic money. These four major forces negatively impact cities. Cities can have self-destruction

of diversity by an area getting really popular or successful and have other businesses come into this area and create less diversity. Zoning codes are another reason that can cause diversity problems. Bordered vacuums are referenced as places that create borders and usually have a generalized use. Examples of this would be universities, hospitals, civic centers, and airports. These facilities usually don't usually promote diversity. Population instability obstructs diversity, especially in low-income areas. Slums are a huge problem that are hard to fix because people move in and out too quickly. Jacobs explains that urban renewal projects in the past that have tried to stop slums were mostly failures. Lastly, money can't fix everything. Money can help create things, but it cannot make an unsuccessful area successful without the conditions needed for a city to thrive.

Part 4, "Different Tactics," promotes different tactics or tools to improve cities. This includes increasing subsidized housing, which reduces the number of automobiles by improving public transportation. Most of the city's problems are due to cars and the things that are done to accommodate them. Cities need multiple ways to travel around cities. For visual order, streets represent cities which can be a form of art. Having different kinds of buildings, storefronts, and businesses can visually interrupt streets so they don't look endless. Another thing that Jacobs believes is that projects are necessary to cities. She thinks that low-income housing projects are where work is needed the most and that these places should be livable. These places should also be assets to the people who live here and choose to live here freely by choice. Jacobs expresses that revamping governing and planning districts is something that needs to be done because they need the people input. Lastly Dr. Warren Weaver, writes in the 1958 Annual Report of the Rockefeller Foundation, defines "three stages in the history of scientific thought: (1) ability to deal with problems of simplicity; (2) ability to deal with problems of disorganized complexity; and (3) ability to deal with problems of organized complexity" (p. 429). Jacobs fits the development of city planning into these three frameworks. Cities are large and complex with varying problems. Only using multiple responses and actions can address these complex city problems.

In conclusion Jacobs provides good analysis of what contributes to successful and unsuccessful cities and addresses what things could be done to improve them. There are many parts to a city and factors that play into them. One of the most important factors that I took away from this book is that people play a big part within a city. People

participating in the streets, sidewalks, parks, transportation, and living within cities create successful cities. Another big take away that I got is that diversity is everything. Having different uses at different times promotes people to be in that area of the city.

## “Starting to Live a Life”: Understanding Full Participation for People With Disabilities After Institutionalization

*“Starting to Live a Life”: Understanding Full Participation for People With Disabilities After Institutionalization*, is a research article on interviews with people with disabilities to understand how they describe full participation after transitioning from an institution to a community setting. It is also to understand how they identify environmental barriers and facilitators to participation during the process of transitioning. The research was done by ADA-Parc community partners across the United States.

The participants within this study were 153 adults ranging from 18-65 year olds with different disabilities who moved out of an institution into the community. These participants were asked open-ended questions addressing issues that the disability community deemed most important. These questions related to their life and how they felt when moving, community participation, describing everyday life choices in institution versus the community, and factors that support or hinder them from participating in the community after the transition. The interviews were from 2015 to 2017 and the interviews lasted from about 60-90 minutes long. For the results of the interviews, there were four themes. These themes being the process of the transition was ongoing rather than a single event, access to everyday occupations as full participation and what fully represents “living a life”, environmental barriers to participation, and lastly social identity as participation as the transformative process of moving from the disempowering isolation of the institution to being integrated into the community.

Starting off with the process of the transition was ongoing rather than a single event. Participants expressed that they felt the transition as a long-term process that they were still working towards. It required a lot of time to learn their way around their new neighborhood and to find the places where they needed to go. As well as the time needed to learn their new community, they also had to get used to being independent. This is a big contrast from when they lived in a nursing home where everything was structured for them and they were told what to do. For these people with disabilities being able to do what they want freely is very important to improve their quality of life but they are in the need of ongoing support with occupational opportunities and social connections.

This leads me to occupational opportunities and social connections. The participants noted that normal everyday activities, such as cooking and shopping, were very meaningful to them. They also said they wanted to go to other places like restaurants, museums, libraries, gym, church, bars, and to do fun activities outside. Another thing they wanted to participate in community events like festivals, concerts, support groups, or even protests. Lastly they also expressed interests in education whether that was formal university or community college. For the social connections the participants said that it feels better when you're being with people and socializing, building the connections in the community. They also expressed the freedom that they have by being able to go and come back whenever they wanted and could even have a companion stay overnight. It's important for these people to live happy lifestyles and make connections with people and the community, but some of these social connections and opportunities can be blocked by some environmental barriers.

The environmental barriers that are obstacles that are in the way of community participation include finances and employment, transportation, services and support, systems and policies, and societal attitudes. Participants found that there was a lack of financial resources and employment opportunities. Some participants lacked enough money to meet their basic needs and didn't have the resources to participate in additional community activities. They also had troubles with employment opportunities and faced a dilemma. If they worked they would lose their benefits but would still not earn enough to cover their expenses. Relating to employment, they also expressed that transportation was a major environmental barrier. Having a lack of affordable and accessible transportation prevents them from securing and maintaining a job. Another hindrance to participation was services and supports which include personal attendants, adopted and assistive technology, case management, and comprehensive health care. Systems and policies also were reported as a problem being ADA violations and discrimination. Lastly some societal attitude made barriers that were hard to get around. These being feeling like they weren't understood and felt that others weren't aware or accepting of them. Even though people with disabilities have these barriers they still want to be a part of the community and give back.

The final theme was the participants' development of self identity. Many of them described participation as the ability to give back and help others. They wanted to help people like them who have disabilities and didn't want them to go through the things they had to deal

with. There were different views on what a disability identity is. Some viewed it as the problem as the environment and others viewed it as the problem preventing participation. Viewing the disability identity as the problem preventing participation suggests that disability identity develops within the social context of the disability community. There are many conclusions that came from these interviews on people with disabilities transitioning from an institution. The first one being that people with disabilities usually prefer living in less restrictive communities and live in communities that better facilitate participation within them. Even though they prefer living in less restrictive communities, transition to the community itself is not enough to support their full participation. This transition is an ongoing process that requires time, extended services, social support, including local disability, independent living, and advocacy organization. Lastly occupational therapy practitioners working in the community setting could seek to partner with local disability advocacy communities to support their clients which helps with development of a sense of identity and self-confidence after transitioning to the community.

# Project Justification

This project that I have created is important to me because as someone who has a disability, I want others like me to get the help they need, thrive, to live somewhat independently, and feel comfortable in their environment. There are also young adults in my life who need extra support who do have disabilities and need a place where they can live and get the extra help. Knowing this and that 21.7% of adults in Minnesota I'm sure there are others out there who would need a place like this that can help them. This project is imperative because it is currently needed because there are currently few to no places for young adults with disabilities to live in assisted living apartments or houses. I believe I'm the one to solve this problem because I am someone with a disability and I know others who are currently struggling as young adults with disabilities and don't have a lot of options to live independently.

At this stage of my academic career doing this project is important because it will help me think directly about the users and how they will interact with the building. The users have very specific needs that I will have to design around. Also the information and design that I do on this project will also be helpful for future projects. It's important to do this project at this stage of my professional development to show my understanding of designing around the users of the building. Also doing this project shows how I want to help others who need it. The information I gathered and learned from this project will help me think about how people use the building and how to accommodate everyone and to think about people with different needs. Learning about ADA codes and how to design for people with disabilities will be essential to future projects. I feel like doing this project at this time is important for the profession because I feel like designing for people with disabilities is still relatively new and designing a whole building for people who need it is important. Past projects that I have done haven't incorporated the needs of people with disabilities, so having this project where the main focus is on designing for young adults with disabilities will help further my knowledge.



In social context this project will bring people together who have disabilities. This will help them relate to each other and create a community within the project which is important to be around people who understand you. For the cultural context of this project it demonstrates the needs of people with disabilities as well as showing how to implement it into other projects or existing buildings. This is imperative because it's important to design around everyone.

The project is located in Minneapolis which is in Hennepin County. Hennepin County has the highest population of people with disabilities. So this area really needs a place for people with disabilities to live and get their needs met as well as to live independently. I would like for my project to have a low environmental impact, so I will be building where a building already exists, but I will also be including a plaza with trees. The post-occupancy of the project would mainly be young adults with disabilities and people there to help assist them as well as people in the community. The people within this project would impact the community and that is what I wanted.

The project would be supported by Accessible Spaces Inc. which is a nonprofit organization that provides accessible, affordable housing, property management and supportive living services. Using the nonprofit funds for this project would be justified because the project is helping young adults with disabilities to get the assistance they need to live on their own and to improve their lives. The funds would be coming from Accessible Spaces Inc and the sources of these funds would be justified because the money would be used to help people with disabilities and create assisted living facilities. This project isn't focused on creating a profit or a return on investments, but is focused on giving assistance to people with disabilities and creating a sense of community. This project is mixed-use, so the first floor will have opportunities to make money within the building as well as to impact the community.

This project isn't just meant for young adults with disabilities, but for the community around it and the people who live in it. By doing this project I hope to show people that this building type is needed within our society. This project would contribute to the advancement of knowing how to design around people with disabilities as well as creating places for young adults to live. Also showing that assisted living isn't just for old people, but also for young people with disabilities.

# Historical, Social, & Cultural Context

## Historical Context of Disabilities

Throughout history within the United States, people with disabilities have struggled with societal barriers that excluded them from their communities. These people with disabilities had to fight against the exclusion and segregation for their rights. They started with the establishment of an independent living movement which challenged the notion that people with disabilities needed to be institutionalized. A big shift in disability public policy happened in 1973 with the passage of section 504 of the Rehabilitation Act. For the first time with Section 504, the exclusion and segregation of people with disabilities was viewed as discrimination. It was the first time that Congress recognized that social and economic status of people with disabilities was because of societal barriers and prejudices. The next big event that happened was The National Council on the Handicapped issued its report Toward Independence. The legislative recommendations include enactment by congress of a comprehensive equal opportunity law and be titled as The Americans with Disabilities Act of 1986. In 1988, the first version of Americans with Disabilities Act (ADA) was introduced. A year later the revised ADA was released and was passed by the Senate. Finally in 1990, ADA was passed and signed into law by President George H.W. Bush. In the years that followed the ADA titles I - IV came into effect and adjustments were made to it as well and transformed into what it is today. As of today, ADA is still relatively new and has only been around for about 30 years, which isn't very long.

## Social Context

The social model of disability identifies systemic barriers, negative attitudes, and exclusion by society. This means that society is the main contributory factor in disabling people. Anyone can have a disability at some point in their life regardless of age, class, race, or gender. The general public tends to think that people with disabilities are a separate group with “special” needs. This leads to people having low expectations for people with disabilities. Since the general public has low expectations for people with disabilities, they think that they are inspirational even though they haven’t done anything extraordinary and just do everyday normal things. Society also sees that having a disability is a bad thing and wishes that they weren’t someone who has a disability. People with disabilities, including me, want having a disability to be a normal thing and not be seen as an inspiration for doing everyday normal things. We just want to be treated like everyone else and not just seen as someone who has a disability.

## Cultural Context

There are two different aspects of culture when it comes to disability. The first one is culture of disability and the other one is cultural views of disability. Culture of disability relates to how people with disabilities as a larger community or sub-community of people with specific impairments view themselves. These groups have their own set of rules and behaviors that are acceptable within that community. When it comes to cultural view of disabilities it refers to how people with disabilities are generally viewed by the community or culture. There are a lot of stigmas attached in many cultures to being disabled. Lucky in the United States, the views on people with disabilities are changing.

# Site & Context Analysis

## Views

Minneapolis's city grid is in a square grid, but is interrupted by the Mississippi River. The grid looks very straight forward, but gets more organic and angled when it comes to the center of the city. In the center of Minneapolis is a weird, wavy, triangle grid that has the highways and river creating its form. The map on the bottom shows most of Phillips district and part of Powderhorn. My site is shown in the red square which is located in Phillips district. Around my site there are many different road types. The map also displays highways in pink, major streets in yellow and orange, and minor streets in white. There are parks located in green on the map. To the north of my site you can see a dashed blue line that indicated a walking path.

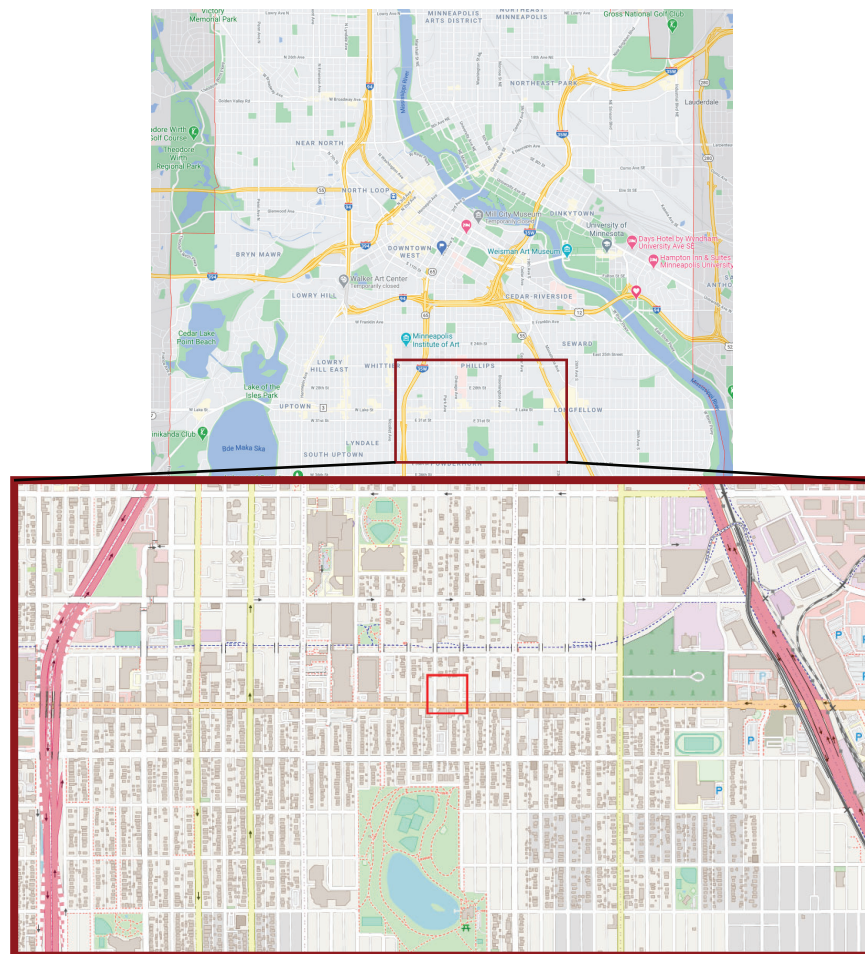
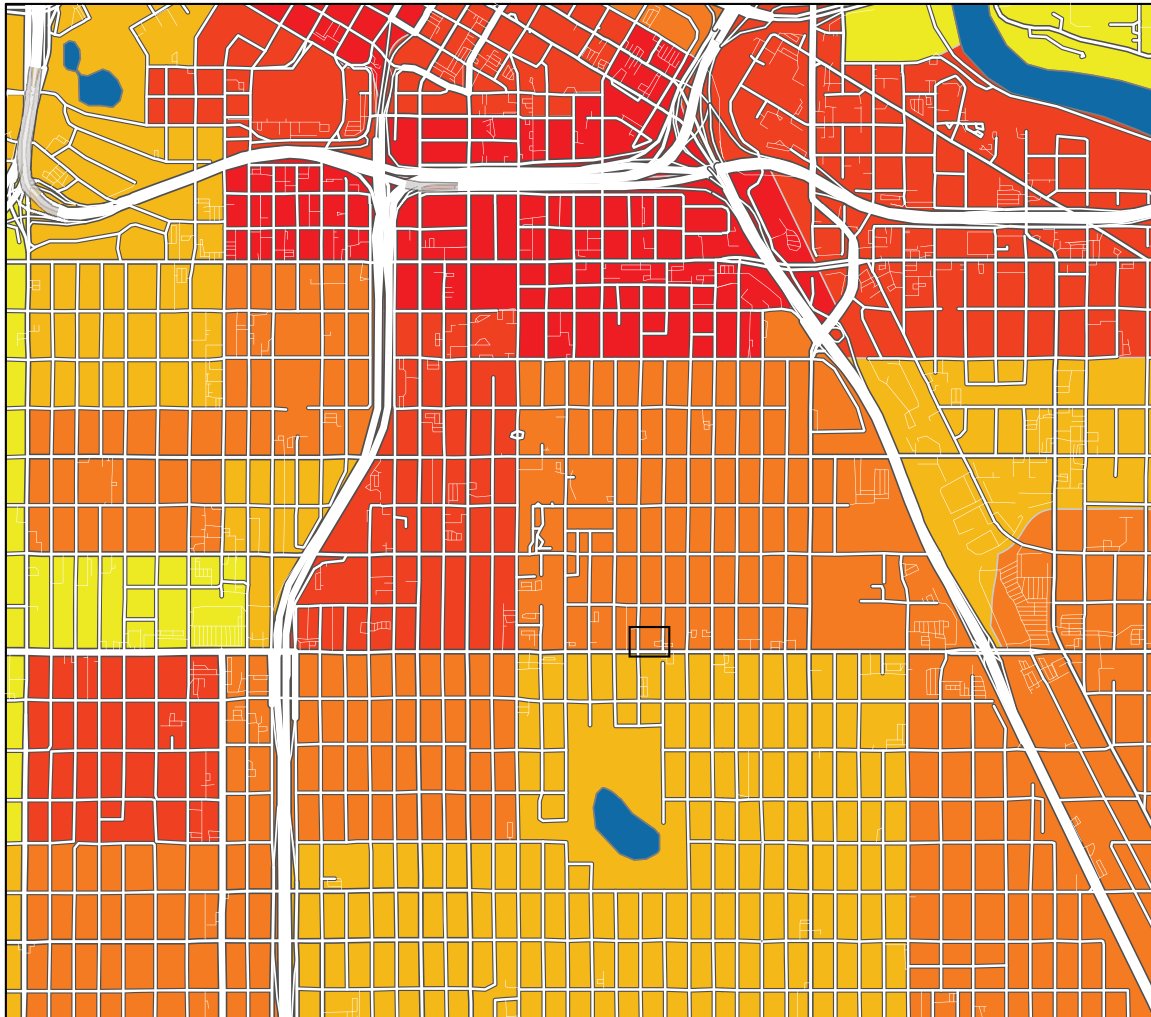


Figure 72-73

## Disability Data From American Community Survey

The map below shows the percentage of people in that area who have some type of disability. My site is located in an area that has 10.9%-14.8% of people have some type of disability. Like I stated before I chose this county, city, and site because of the high population of people with disabilities. There are hardly any spots near my site that are less than 7.2%. To the north of my site is the highest percentage, about 14.9% to 39.9% of people with disabilities. To the south of my site has a lower percentage with about 7.3%-14.8%. Over all, this area has a high percentage of people with disabilities.

### Site Analysis



0 0.2 0.4 0.8 1.2 1.6 Miles

□ Site

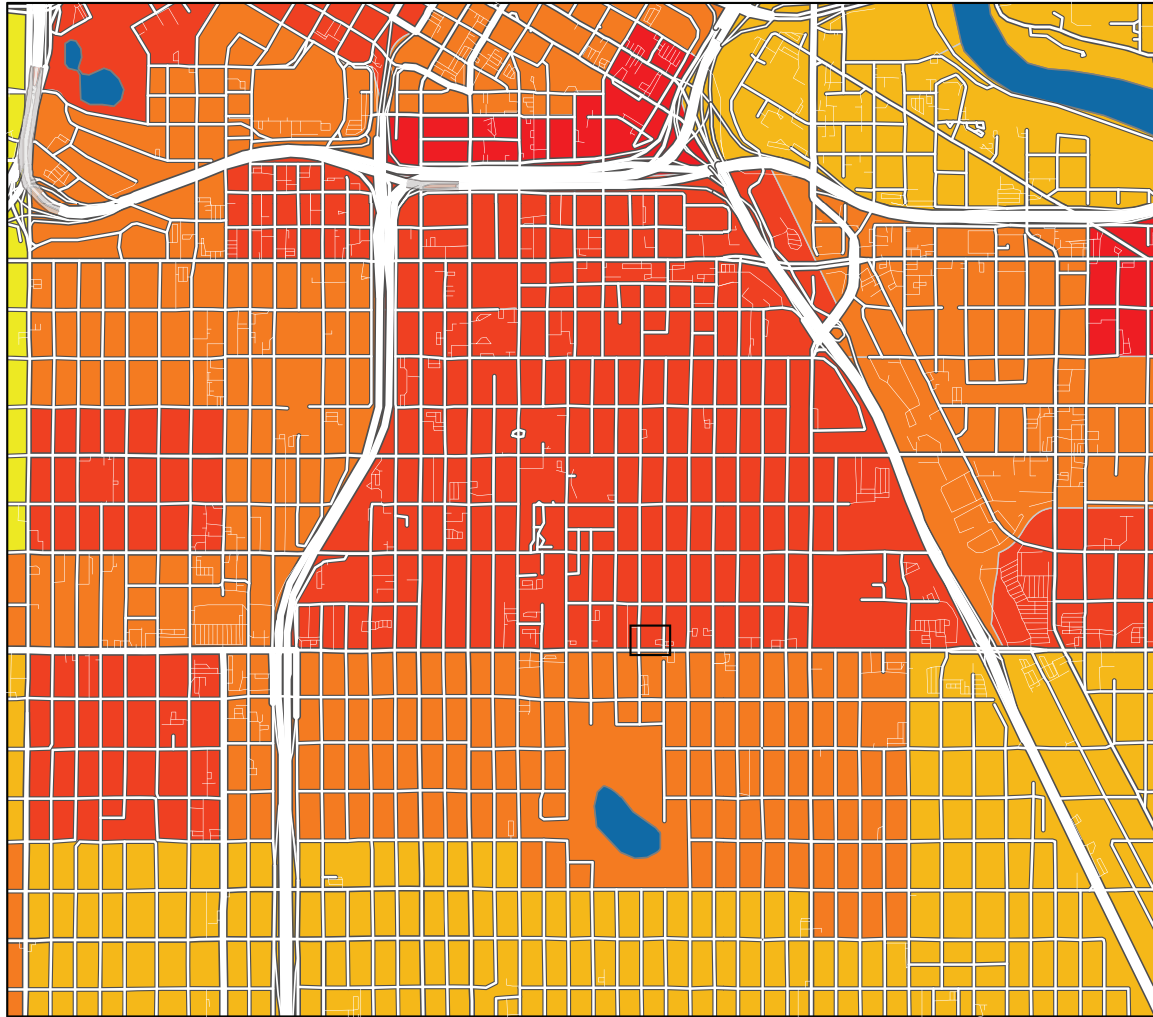
#### People with any Disability

- Less than 7.2%
- 7.3% - 10.8%
- 10.9% - 14.8%
- 14.9% - 20.0%
- 20.1% - 39.9%

Figure 74

## Disability Data From American Community Survey

This map displays the percentage of people with a vision related disability. Having a vision related disability is those who are blind or having serious difficulty seeing. The percentage of people with a vision related disability is 3.1%-5.4% on my site. Just like the last map, the percentage is higher on the north side of the site. The thing that is different about this map is that it seems a bit more consistent throughout it. It seems to be pretty consistent around my site from a range from 1.8% to 5.4%.



0 0.2 0.4 0.8 1.2 1.6 Miles

□ Site

### People with a Vision Related Disability

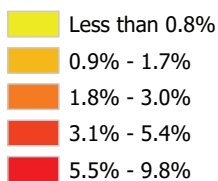
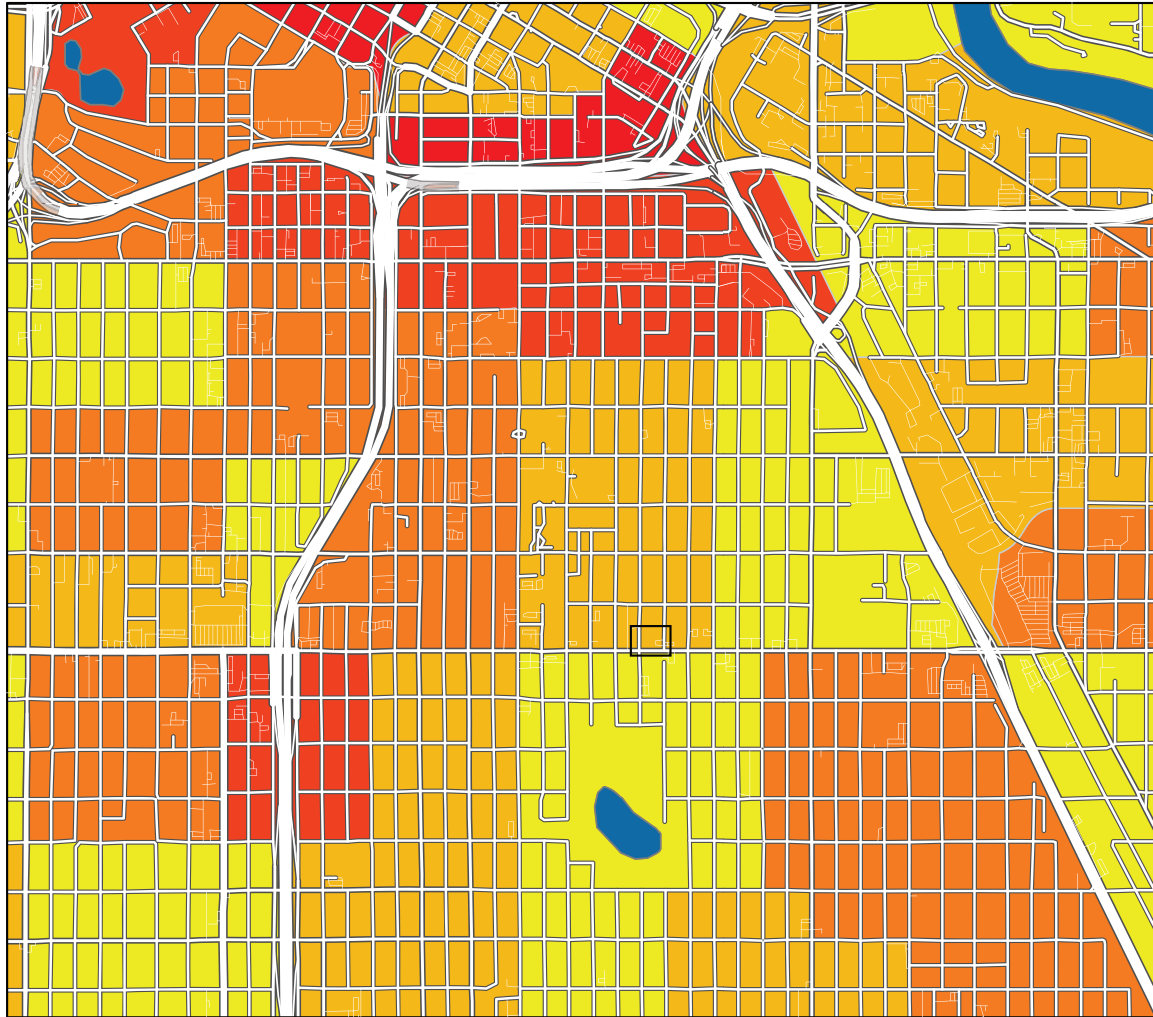


Figure 75

## Disability Data From American Community Survey

For this map it shows the percentage of people with a hearing disability. When it comes to hearing disability it is people who are deaf or having serious difficulty hearing. Compared to the other maps, my site has a lower percentage of 1.9%-2.9%. This map is very different from the other one. It has a lot more yellow within it compared to the other one, but where it is red and darker orange it is consistent with the other maps. There seems to be less people in this area that have a hearing disability compared to the other disabilities.

### Site Analysis



0 0.2 0.4 0.8 1.2 1.6 Miles

□ Site

### People with a Hearing Difficulty

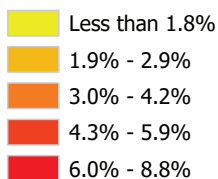
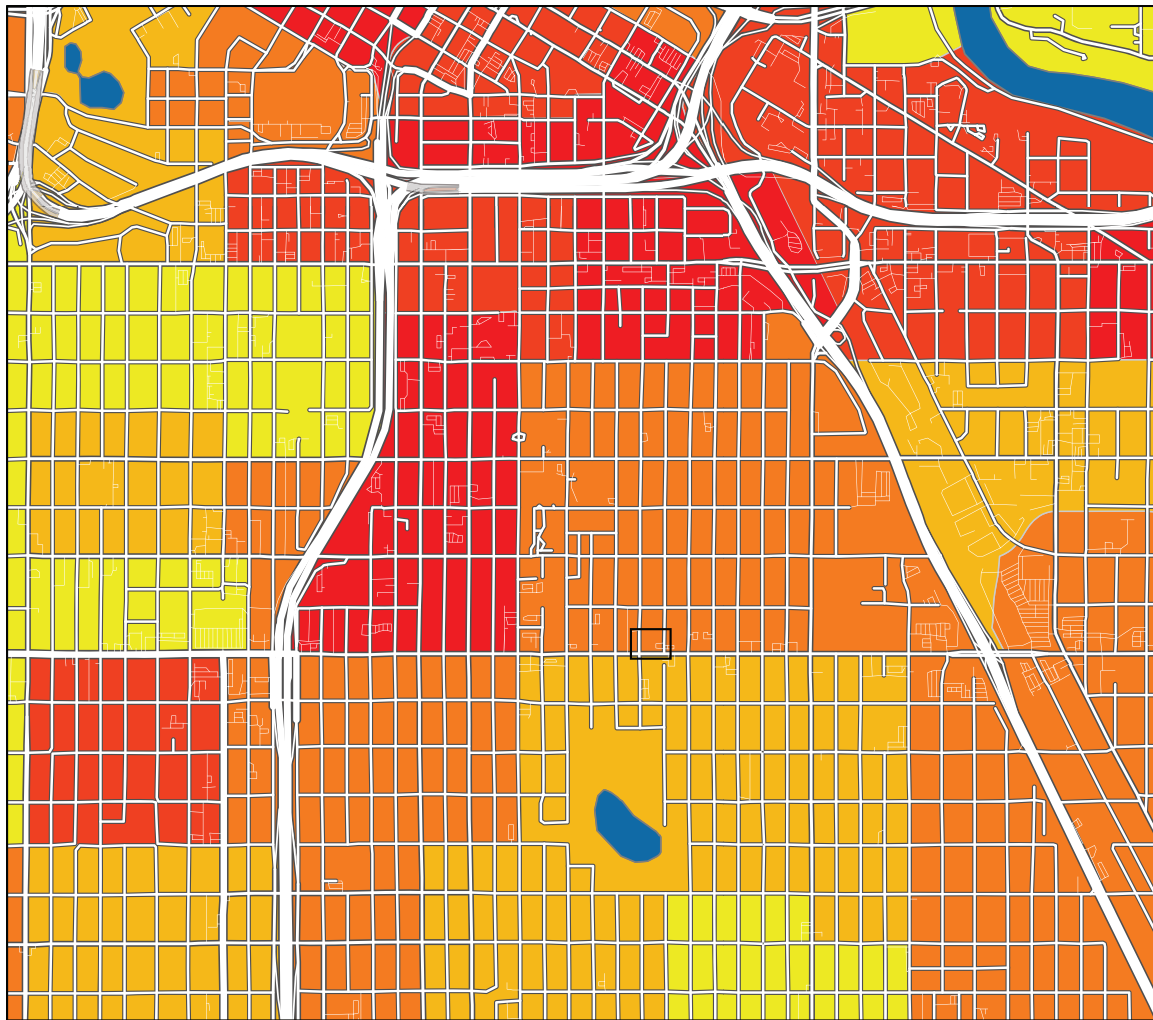


Figure 76

## Disability Data From American Community Survey

On this map it shows the percentage of people with an ambulatory disability. Ambulatory disability is people who have difficulty walking or climbing stairs. Within my site the percentage of people with an ambulatory disability is 4.8%-7.2%. As usual the highest percentage is north of the site. What is different from other maps though is that there is a high percentage to the west of the site. To the west of the high percentage is a really low percentage which is the biggest lowest percentage on this map. When usually the south has the lowest percentage.



0 0.2 0.4 0.8 1.2 1.6 Miles

□ Site

### People with an Ambulatory Disability

- Less than 2.8%
- 2.9% - 4.7%
- 4.8% - 7.2%
- 7.3% - 11.4%
- 11.5% - 22.0%

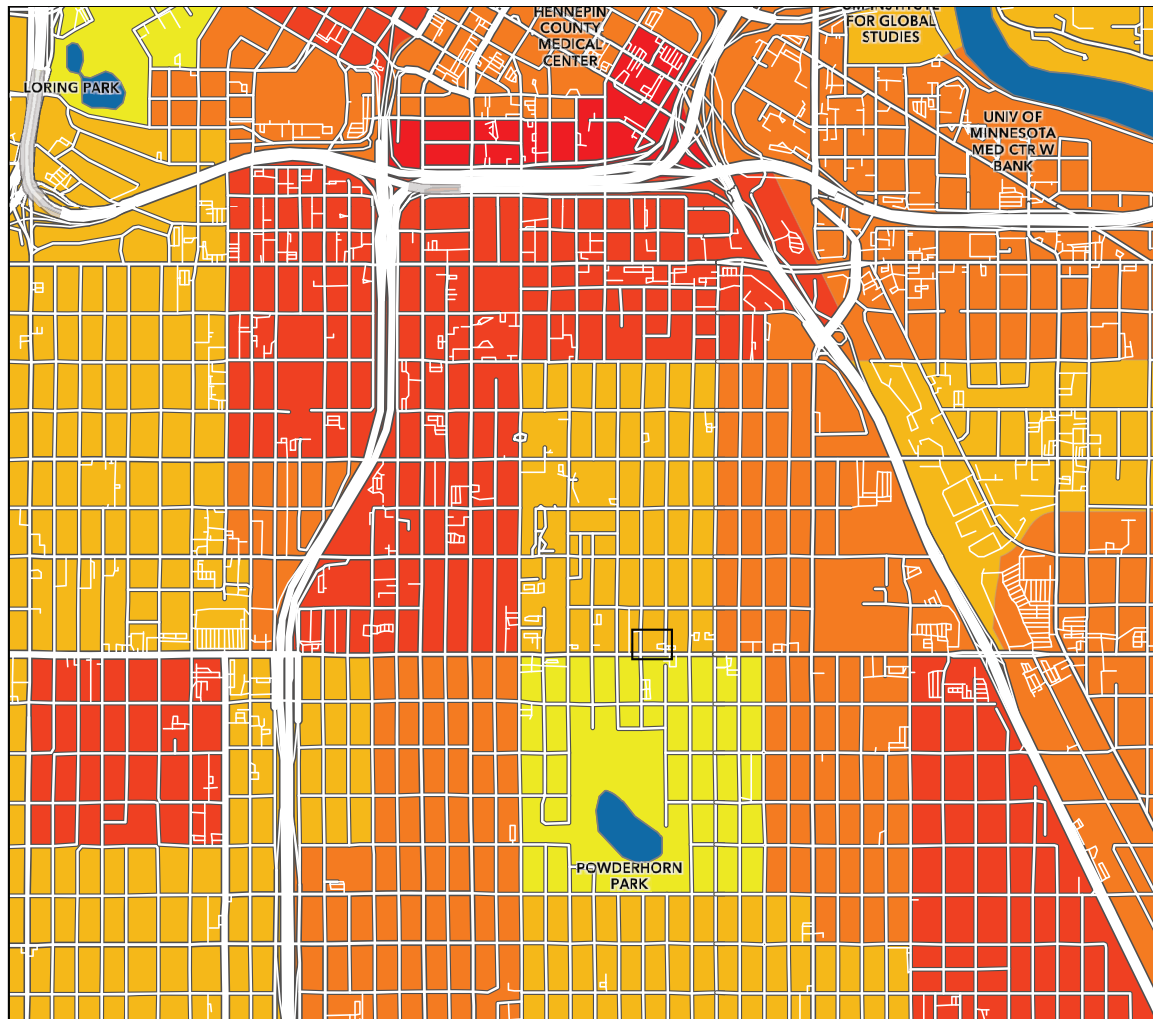
Figure 77



## Disability Data From American Community Survey

This map displays the percentage of people with a cognitive disability. A cognitive disability is defined as a physical, mental, or emotional problem, those who have difficulty remembering, concentrating, or making decisions. The percentage of people with a cognitive disability is 3.2%-5.7% on my site. To the south of my site has the lowest percentage in the area at 0%-3.1%. As to be expected to the north of my site has the highest percentage of people with a cognitive disability.

### Site Analysis



0 0.2 0.4 0.8 1.2 1.6 Miles

□ Site

### People with a Cognitive Disability

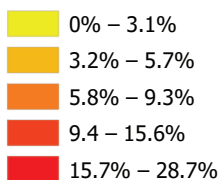


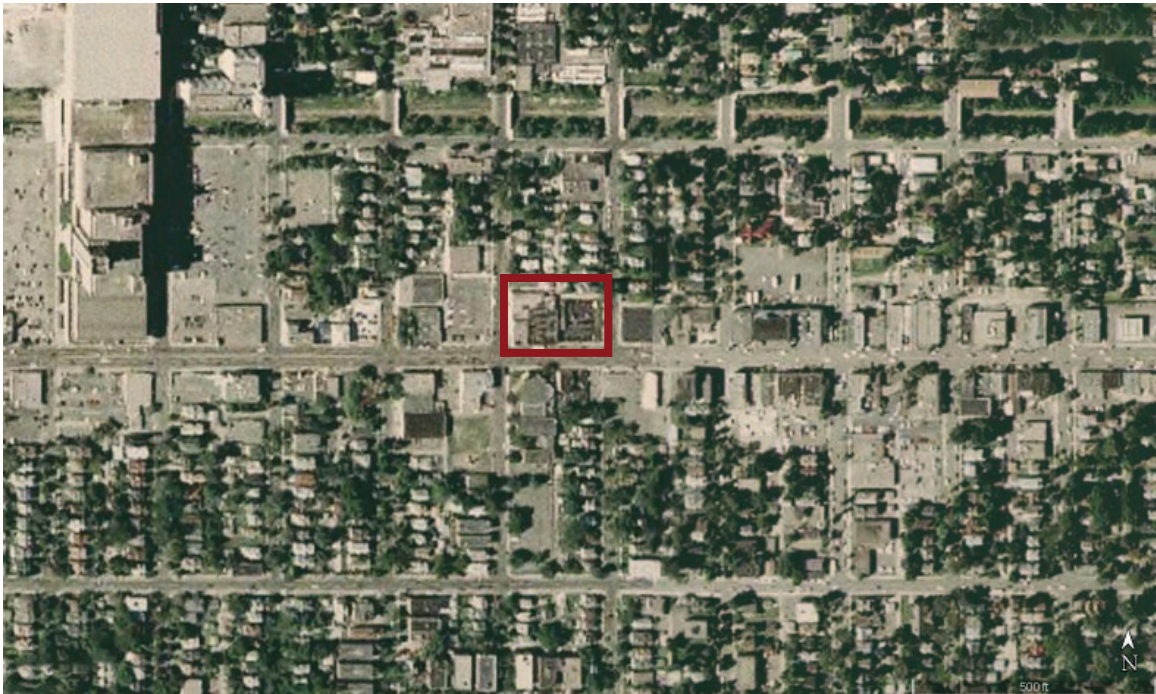
Figure 78

## History

The maps displayed are aerial photos that are around my site. The oldest image that I have is from 1991 and the newest is this year (2020). My site hasn't changed during this time. From these maps it looks like it has been the same. To the left of my site is a mixed-use apartment building which was built in 2013 which is relatively new.



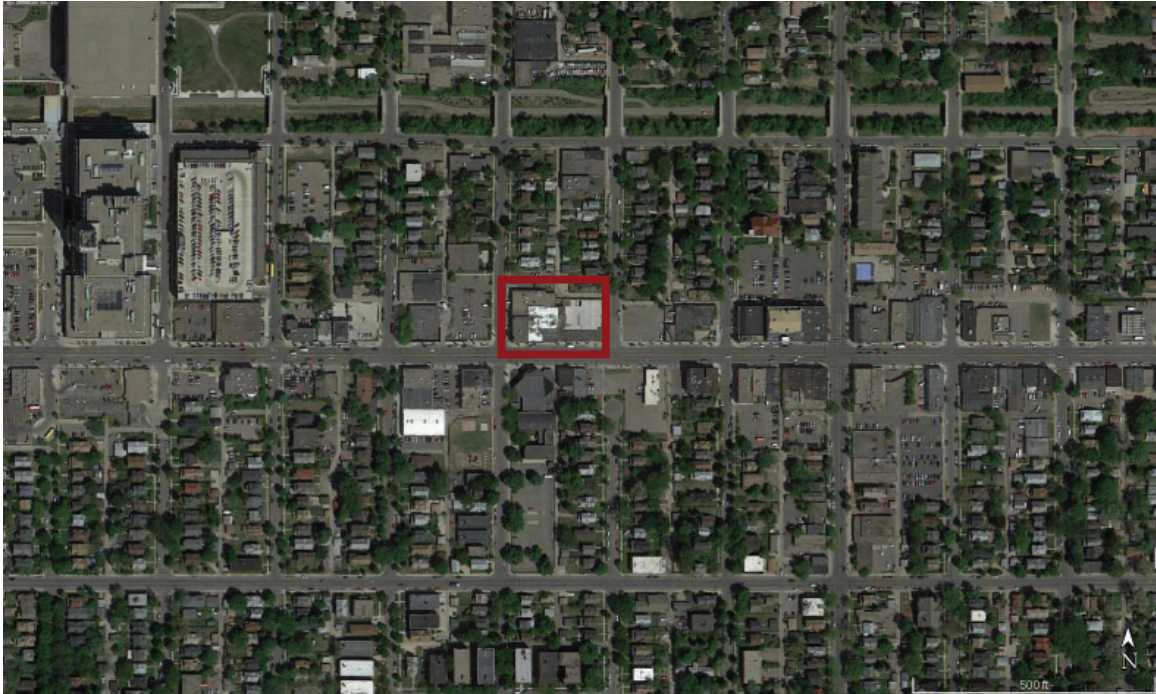
1991



2003

## History

From looking at all the maps, there hasn't been a lot of changes within this area which seems kind of strange. I feel like building a new building within this area will hopefully add some life and add to the community.



2010



2020

Figure 81-82

## Aerial Photographs

Looking at Minneapolis from above shows a view of the existing landscape of the city. As shown in the map, Minneapolis is a really big city and pretty spread out along the Mississippi River. There are also a lot of big lakes that are either a part of the city or around it. To the east of Minneapolis you can see St. Paul which is also along the Mississippi River. When you zoom into my site you can see that it is in the middle of a residential area. There are also a few parks in the area as well as a hospital to the northeast. On the next map you can see that there is a church across the street to the south. Also along E Lake Street are businesses including shopping, restaurants, banking, and extra.

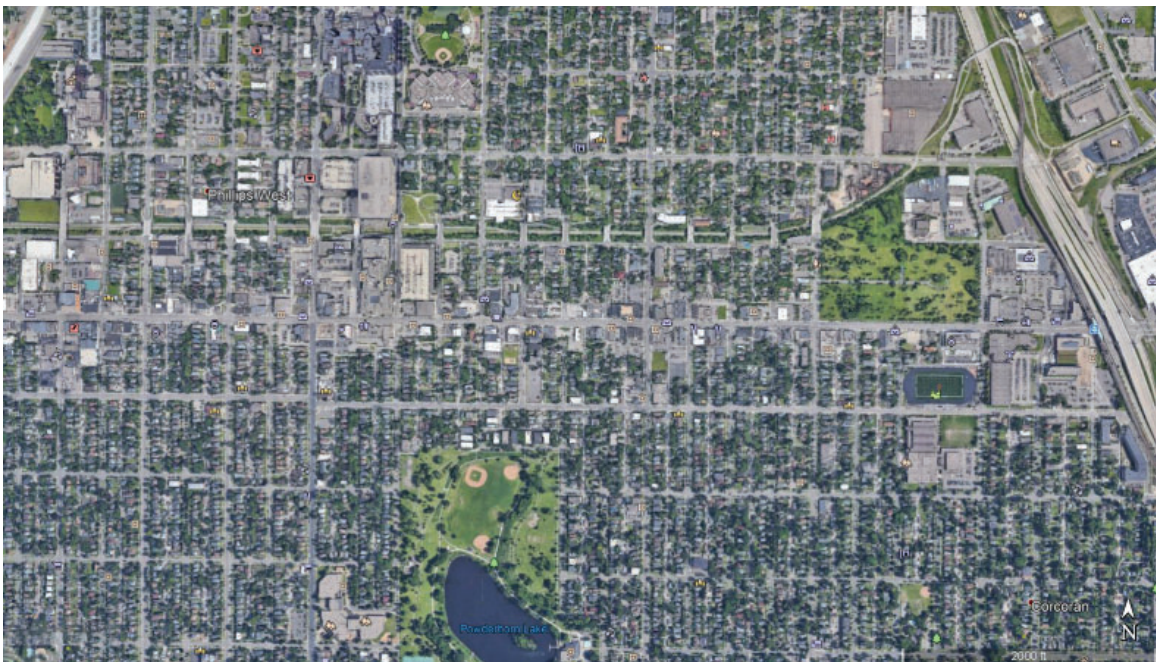
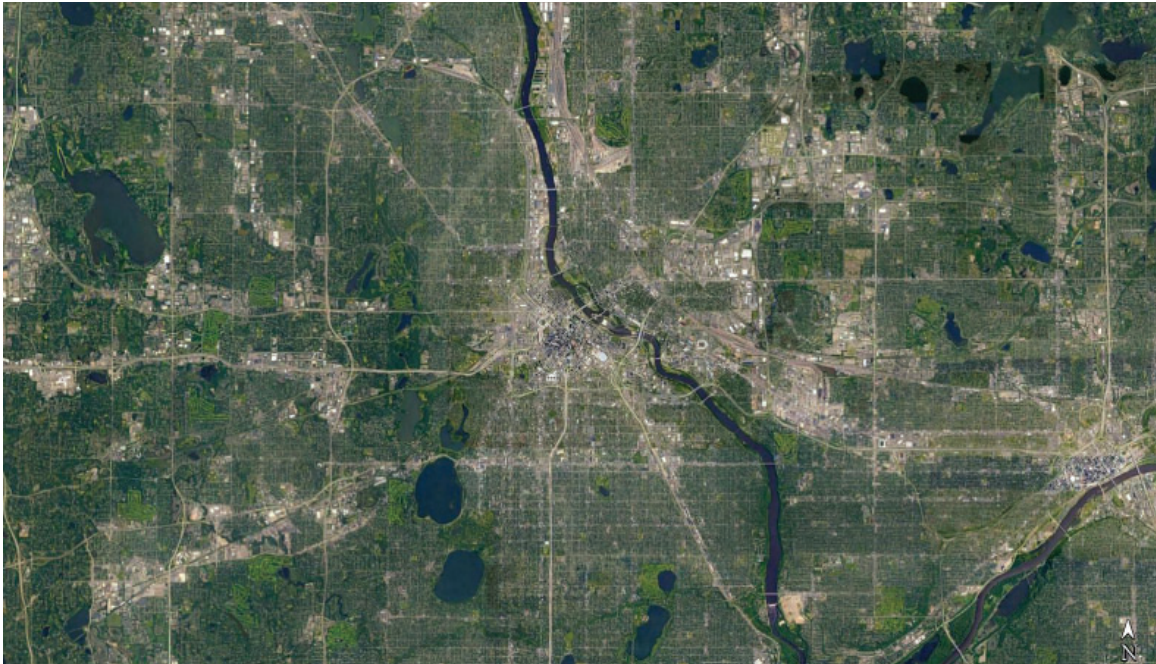


Figure 83-84

Site Analysis

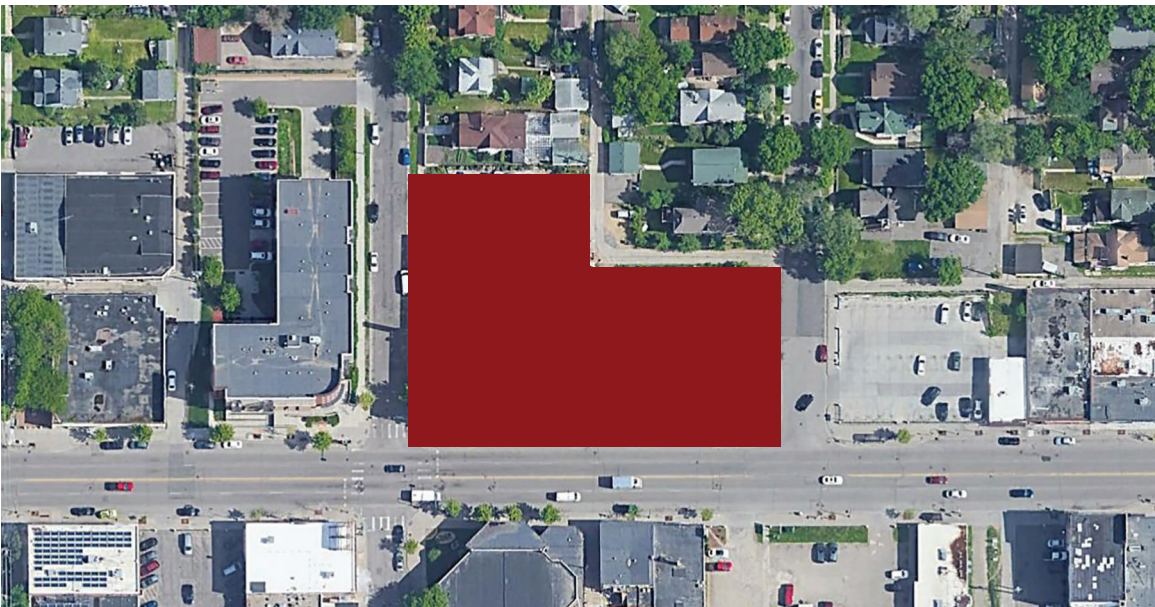


Figure 85-87

## Traffic

This map shows the traffic level around the site. In red show the highest traffic level and this road is E Lake Street. The medium amount of traffic is shown in yellow and these roads are 13th and 14th Ave S. Lastly are the least amount of traffic which is shown in black. Something that isn't shown on this map, but is important to mention is that there are two highways that are on the west and east side. These being I-35W and Hiawatha Ave.



Figure 88

## Base Map

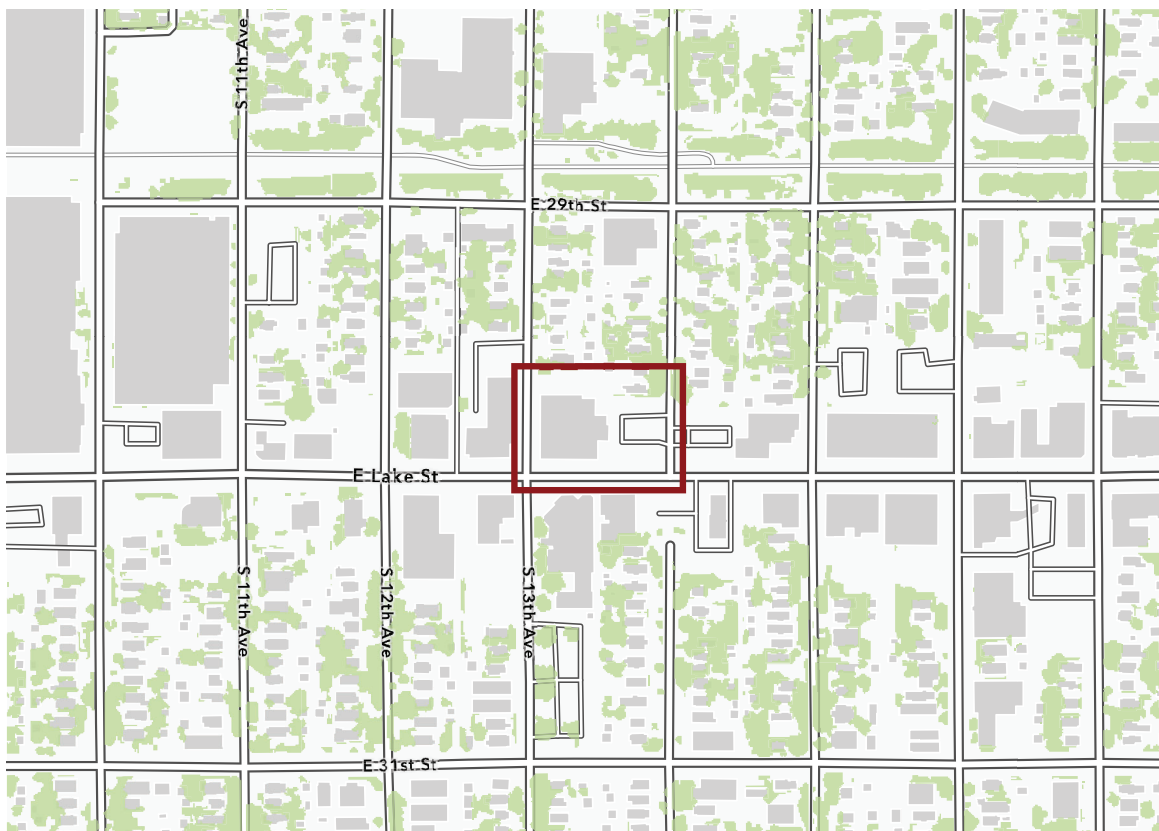
This map displays the sun path and seasonal wind directions. Obviously the sun moves from east to west and shines more on the south side of the site. The summer winds blow to the southeast and the winter winds blow from the opposite direction being the northwest. For design wise it would be best to have a lot of windows on the south side of the site and to have design ideas that can block some of those winter winds and can use the summer winds.



Figure 89

## Plant Cover

Shown on this map is the plant cover of my site and the area around it. Based on this map there isn't much plant cover that exists on the site. Looking at aerial images of my site, I see that there are a few small trees missing on this map. Something that I noticed about this map is that there aren't many trees or plants along E Lake Street which isn't good. To liven up this street, make it look better, and feel safer it will be important to add tree cover along this street. The plaza that I will be creating will hopefully incorporate some plant cover to liven up this site and make it feel comfortable and inviting.



0 150 300 600 900 1,200 Feet

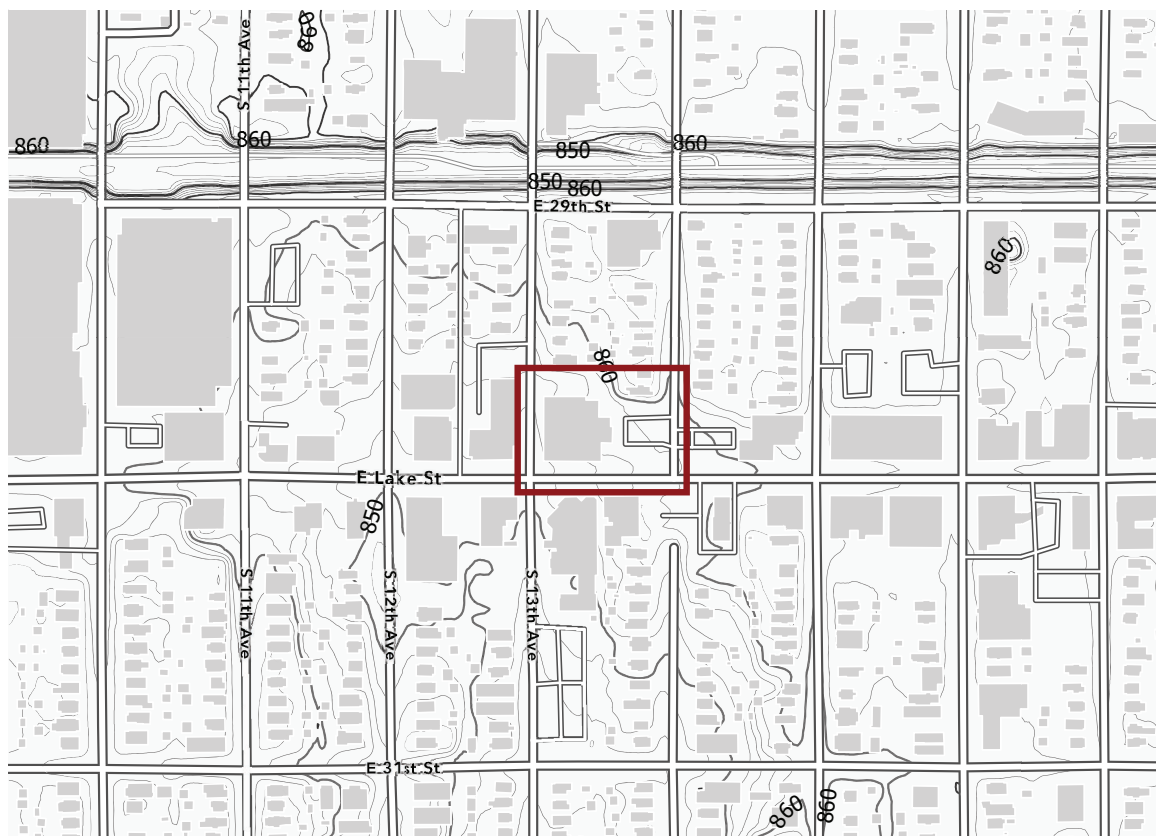
Site

Figure 90



## Topographic Survey

My site is relatively flat, but it is slightly going up from the west to the east. Each line shown is 2ft and the darker and thicker lines are every 10ft. The highest point on the site is at 860ft on the northeast side. The lowest point is on the southwest side at 852ft. This difference is about 8ft from the lowest to the highest point on the site. Thinking about drainage on the site, the rain water would flow from the northeast to the southwest. Looking at the rest of the map, it looks like the walking path that is to the north looks like it has a steep incline. It almost looks like a valley. To the west it looks like it goes down and goes back up. To the east it looks pretty flat and doesn't have a lot of changes. The south looks like the terrain changes a lot as well as the north.



0 150 300 600 900 1,200 Feet

Site

Figure 91

## Climate Data

The graphs that are shown on the next few pages show the average high temperatures and low temperatures, wind graphs, and the sun graph of Minneapolis, MN. As you can see, Minneapolis has cold winters and warm summers. The average winter temperature is about 14.7°F and the average summer temperature is about 76.8°F. The coldest month is January and the warmest month is July. The four wind graphs are from the months January, April, July, and October. In January, most of the wind is blown to the northwest. During April it seems like the wind blows all directions. This is when spring is starting so it gets both of the winter and summer winds. So for directionally, the wind blows mainly towards the north, northwest, and southeast. For July, the wind is blowing mainly south and southeast. Something that I noticed on this graph is there none, if not hardly any, of the wind speed being 11.06 m/s or higher. Lastly in October the wind blows similarly to April. Since it is during the fall it also gets the winter and summer winds. The main directions it blows is to the northwest, southeast, and south.

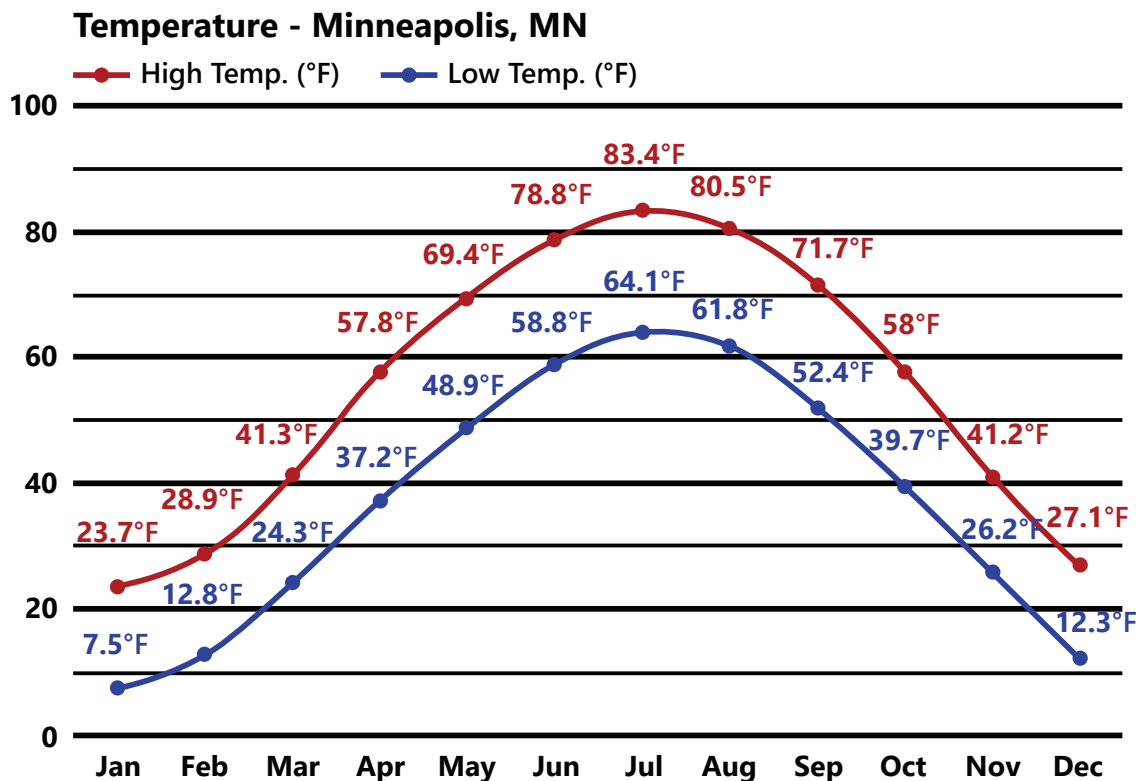


Figure 92

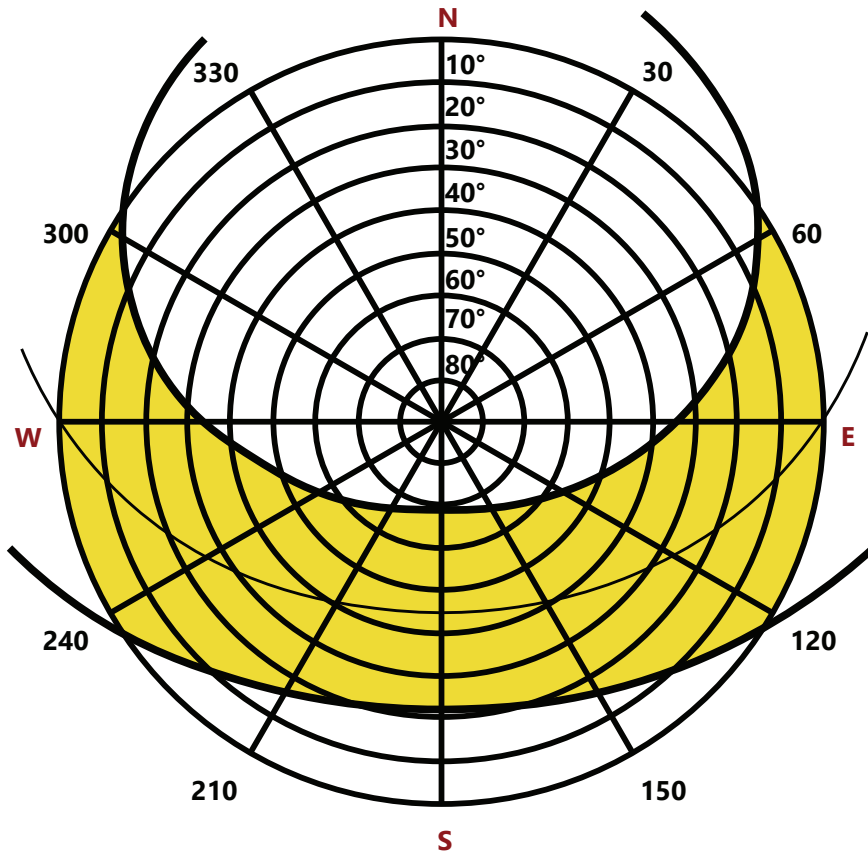
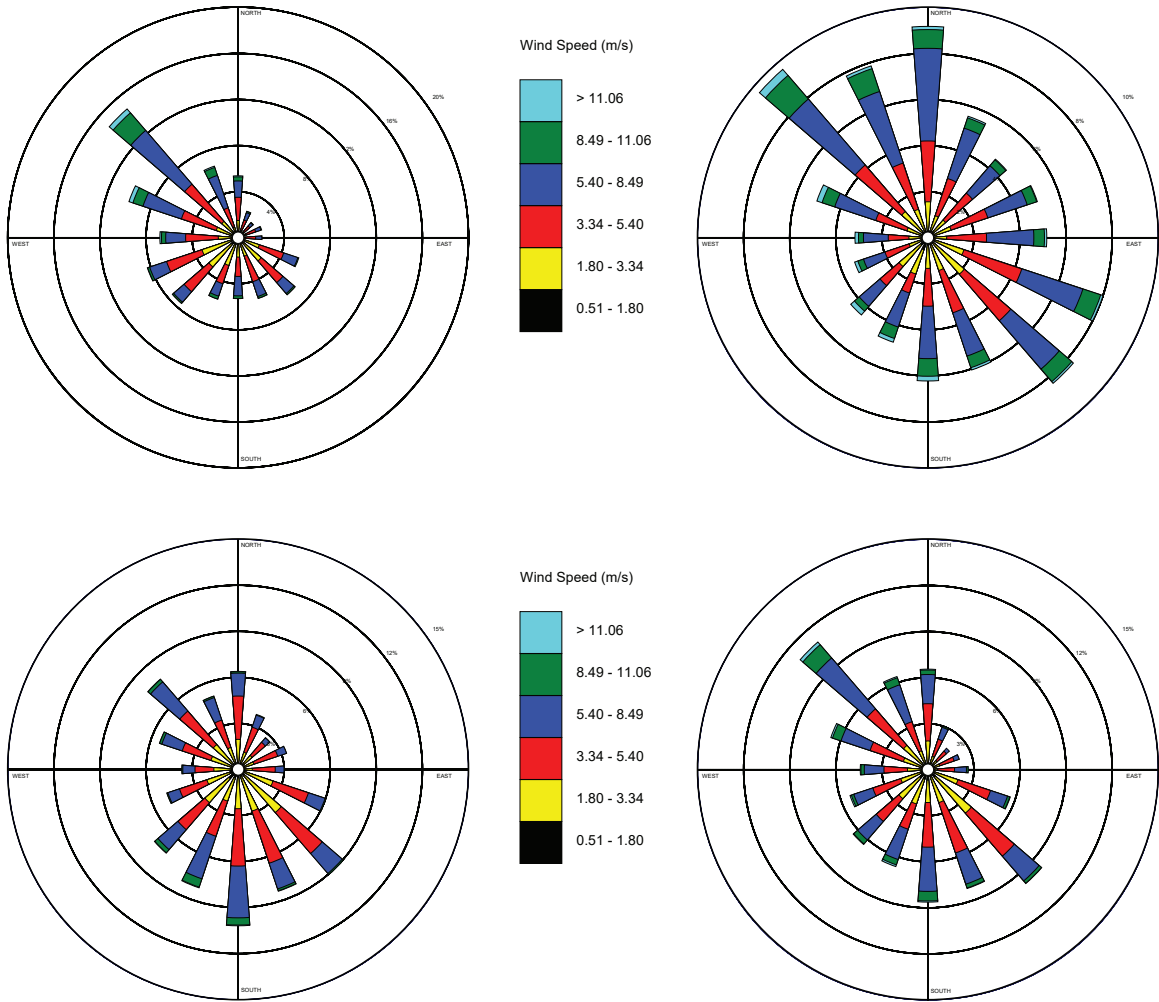


Figure 93-97

# Performance Criteria

## Operation hours

The building operation hours are different throughout the building. For the assisted living apartments and operations, will be open 24 hours for seven days of the week. Which is a must for the people living within the building because of the assistance they need. When it comes to the community area within the building, some of the rooms might be closed down earlier to prevent noise complaints. Outside the building, the bus stop and the plaza will be open 24 seven as well. Lastly the first floor, the operation hours will vary depending on the commercial uses.

## Space Allocation

The criteria that I will be using for space allocation will come from research of similar project typology. Studying these projects floor plans and seeing their locations and using that to formulate where rooms should be located within this project. I will be using my best judgment for the layout within my building and afterwards I will be judging my own performance on how ideal the spatial arrangement is.

## Energy Consumption and Environmental performance

This isn't my main focus on my thesis, but I do think it is still important to strive towards. For energy consumption, I will try to make my building as energy efficient as possible. When it comes to environmental performance, I will be focusing on materials that I use within my project and trying my best to use renewable resources and materials.

## Psychological Impact

Psychological impact will be measured by how young adults with disabilities experience the building. Which includes a lot of design around the comfort for them to make their everyday lives more easier and essassible. To determine these features would be interviewing people with disabilities to experience the building and determine how they experience the design. Computer modeling and rendering will be used to analyze the performance of the project's psychological impact.

## Code Compliance

This is the main focus of this project because I will be designing around the needs of people with disabilities. So I will be following ADA codes and regulations for this project. Hopefully I will have a design that is 100% code compliant and meets all the standards. This will be either a pass or fail based on the codes through this project.

## Room Sizes

**Apartment Size:** 1 Bedroom- 550 - 800 sq. ft. 2 Bedroom- 1,000 - 1,400 sq. ft.

**Community Rooms:** 800 - 1,000 sq. ft.

**Assistant Workers Rooms:** 500 - 1,000 sq. ft.

**Therapy Room:** 800 - 900 sq. ft.

**Classroom:** 900 - 1,000 sq. ft.

**Rental Office:** 100 - 150 sq. ft.

**Storage:** 50- 100 sq. ft.

**Restaurant/Mixed use:** 2,500- 5,000 sq. ft.

**Parking:** To Be Determined

**Workout Room:** 700- 900 sq. ft.

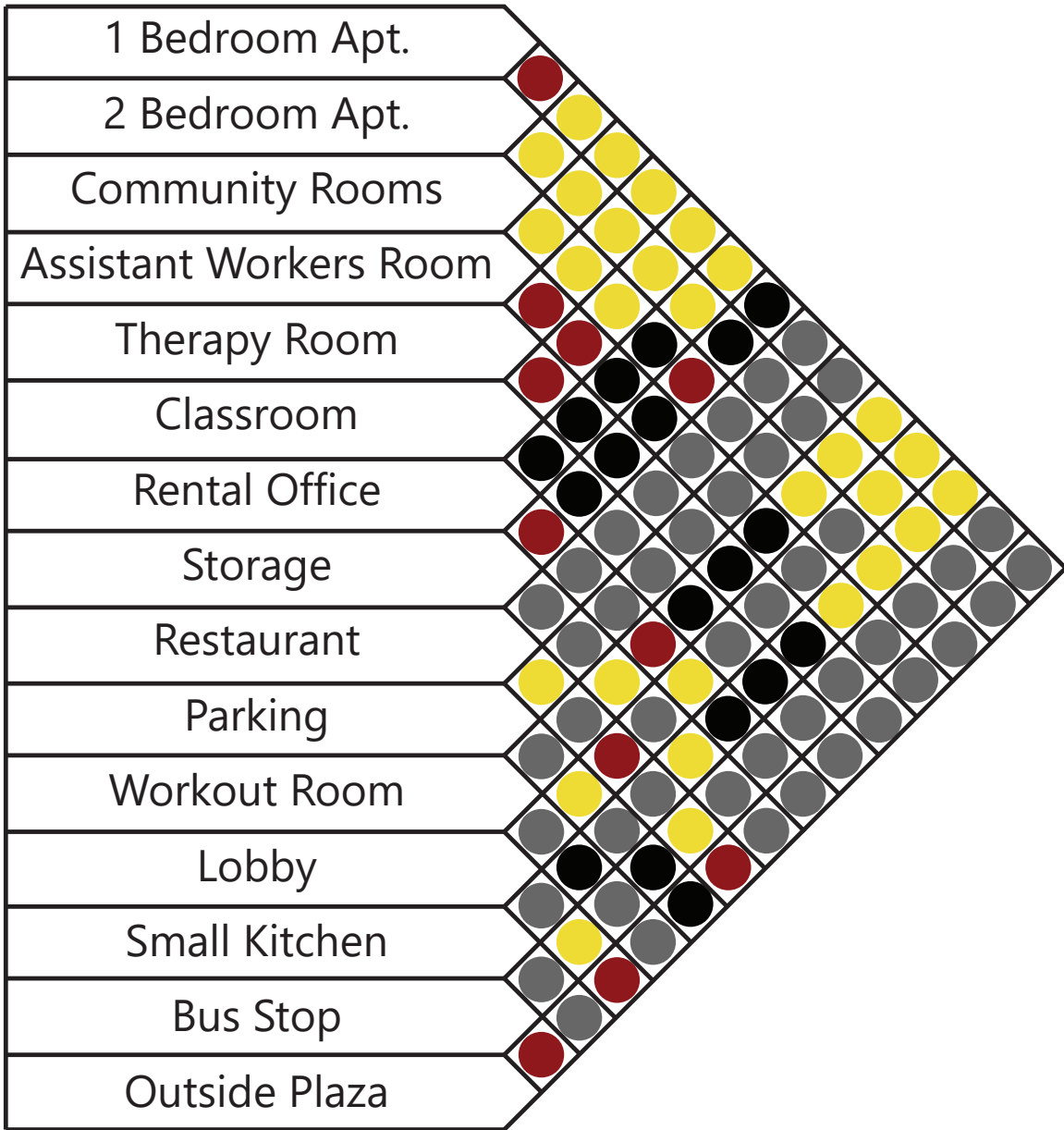
**Lobby:** 300- 500 sq. ft.

**Small Kitchen:** 100- 150 sq. ft.

**Bus Stop:** 100- 150 sq. ft.

**Outside Plaza:** 10,000- 14,000 sq. ft.

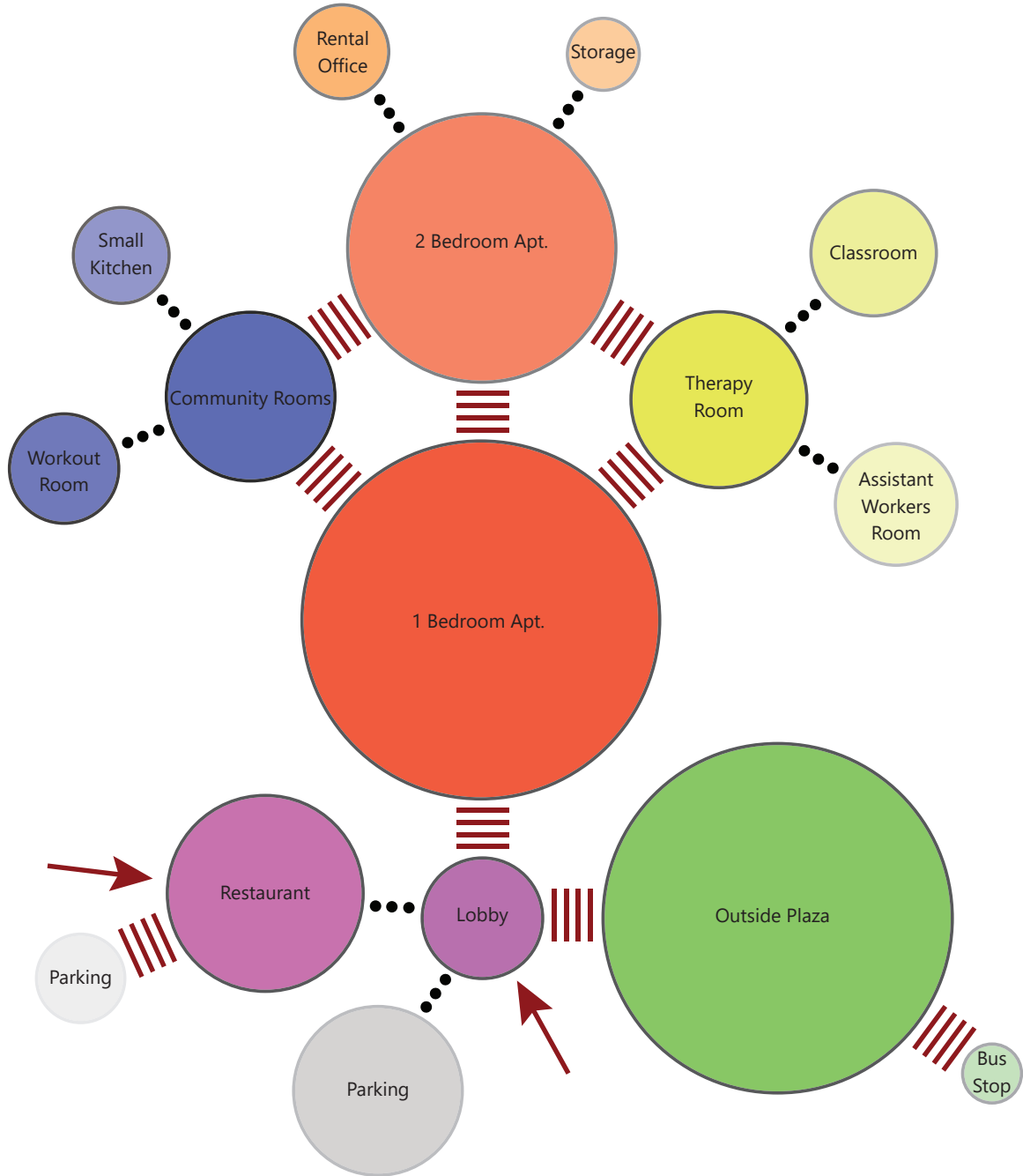
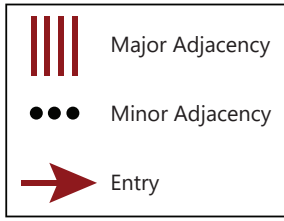
# Space Interaction Matrix



Performance  
Criteria

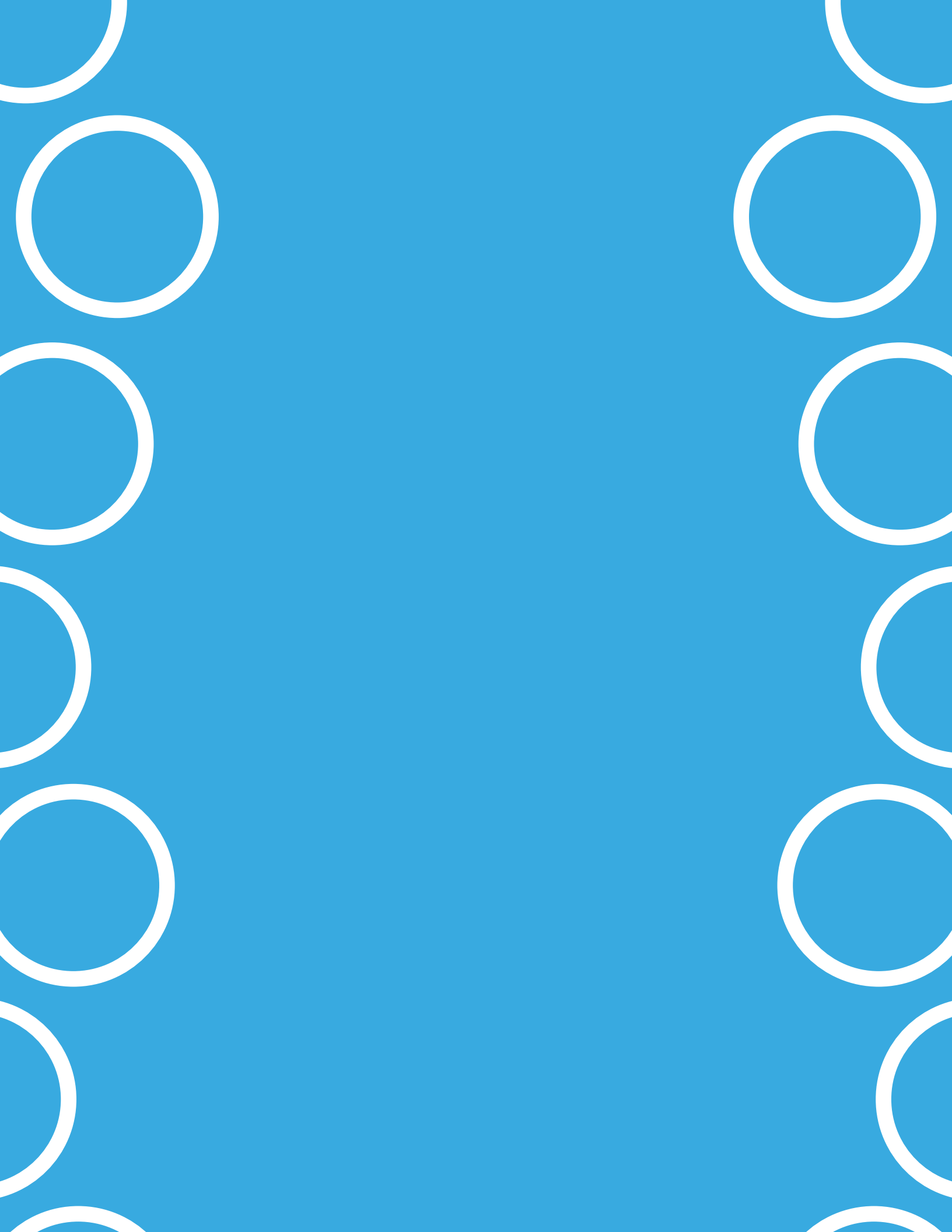
Figure 98

# Space Interaction Net



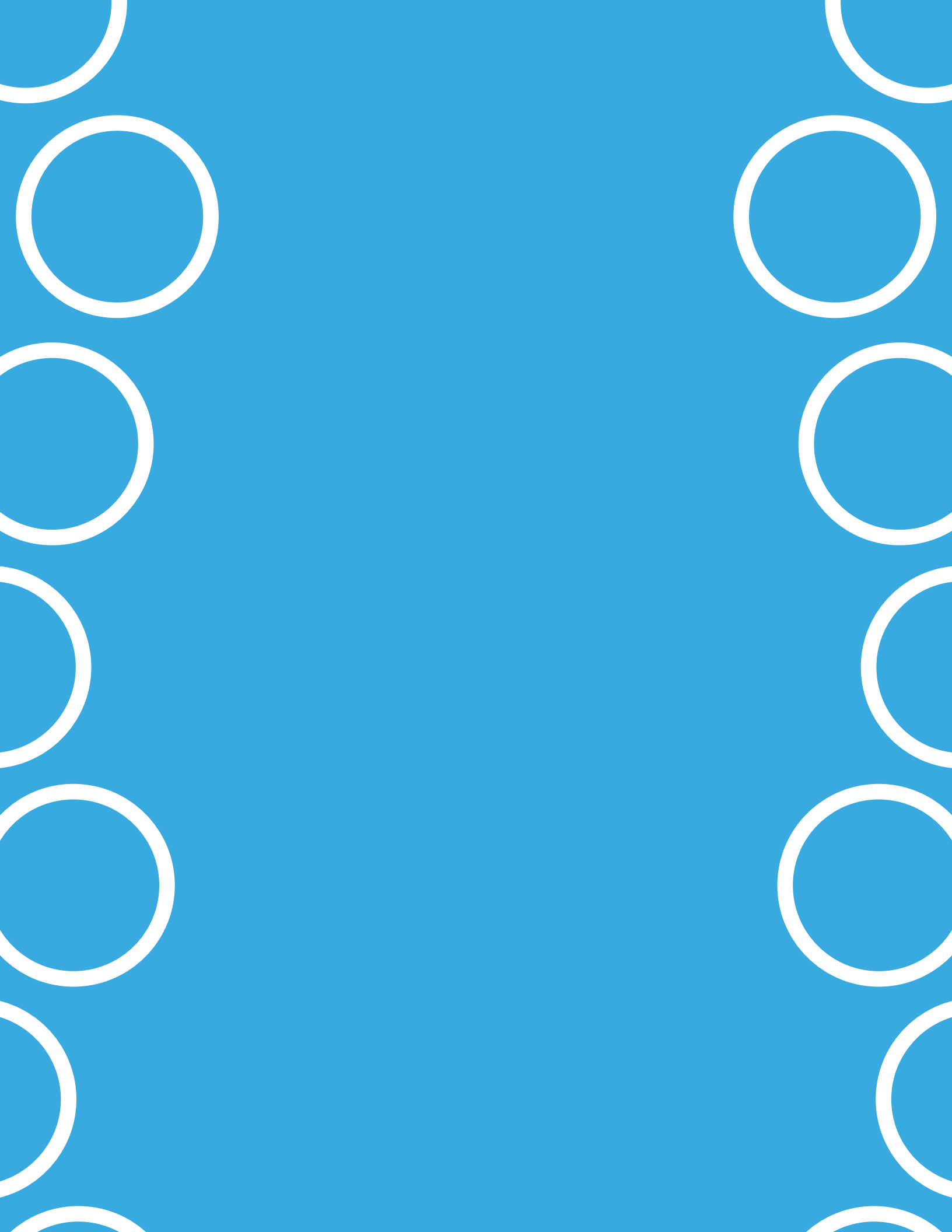
Performance Criteria

Figure 99





# Design Solution



# New Project Goals

## 1. Intentional Design

-Following the Minnesota Building Codes, but mainly focusing on ADA Codes to design for the needs of people with disabilities who live here.

-Designing for the comfort for the people living within which involves giving them enough space to move around, making things accessible, and making their rooms feel like home.

-Correlating rooms that involve the residents be close to them.

-Having personal rooms and spaces be private.

## 2. Sense of Community

-Creating a community for the people living within the building by adding shared spaces like an exercise room, lounge, and community room with a small kitchen.

-Creating public spaces for others to be apart of that live in this community area.

-Locate assistance rooms and staff in an area to be easily accessible to the residents to formulate a personal connection with the staff.

## 3. Opportunities for People With Disabilities

-Creating spaces for people with disabilities to learn life skills including cooking, cleaning, saving money, etc.

-Jobs opportunities

-Transportation options

-Social connections to promote socializing

## 4. Aesthetics

-Create a building with an unique shape, that is inviting, and has an easy access of entering and exiting.

-Having green space within the building as well as outside.

-Providing maximum amount of daylight to provide a warmer feeling.

## 5. Mindset

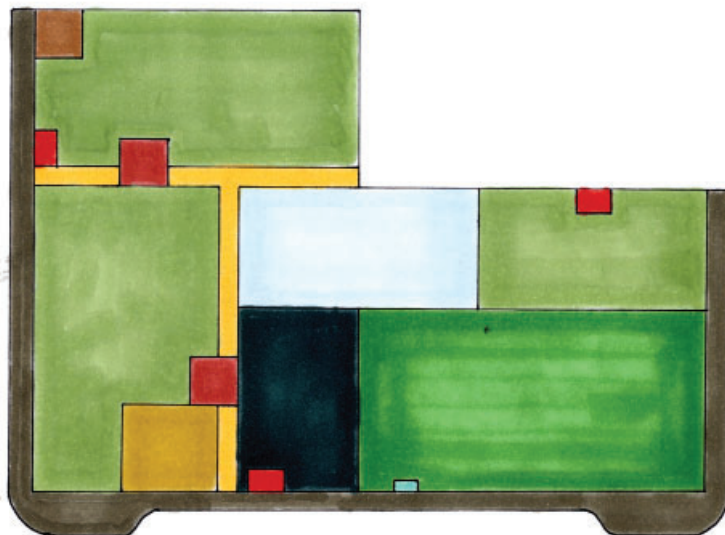
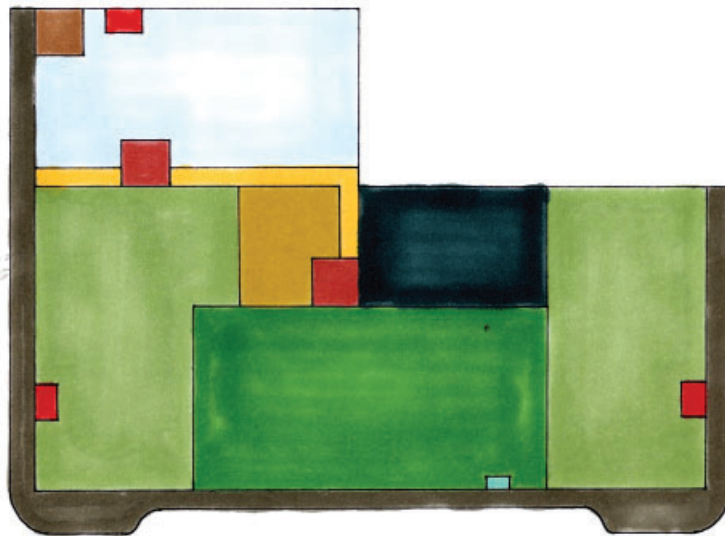
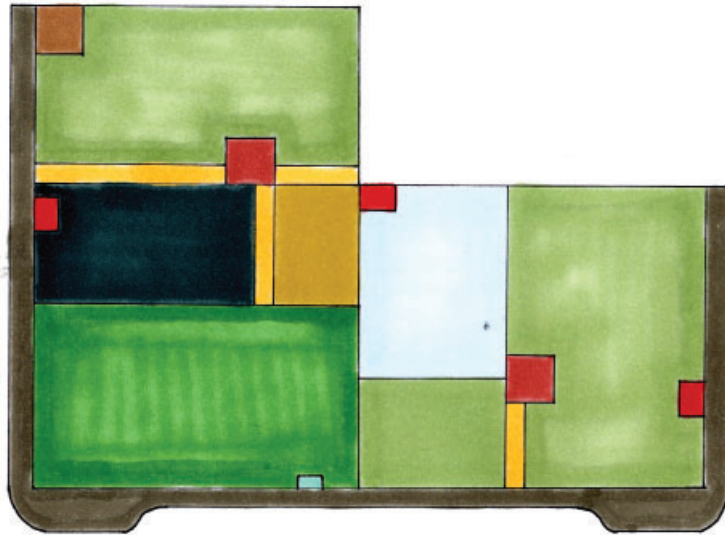
-Create an environment that is fun and interactive instead of sad and gloomy.

-Having the transition from institutionalization to a community setting provide more benefits to the residents.

-Also breaking bad stigmas that goes along with disabilities.

# Process Documentation

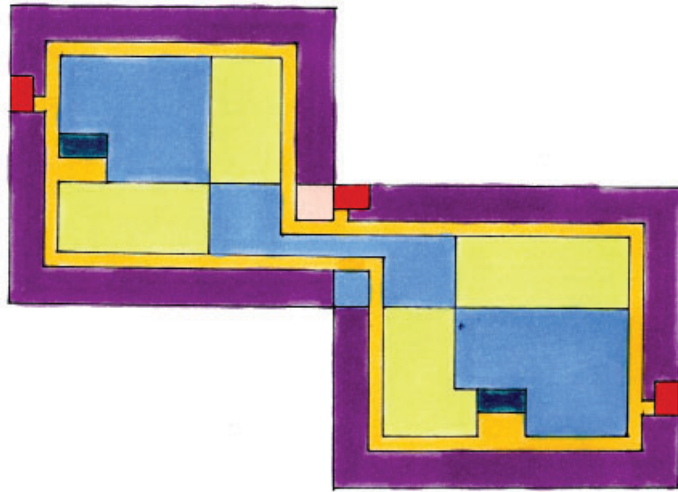
- COFFEE SHOP
- LOBBY
- RENTAL SPACE
- HALLWAYS
- GREEN SPACE
- BUS STOP
- STAIRS
- PARKING RAMP ENTRANCE
- SIDEWALK
- EVENT SPACE
- ELEVATORS
- RESTAURANT



These are my first ideas for my building's first floor. The drawings are of my ideas of what I wanted to do with my green space that I wanted on my site. For the forms I was working with square and rectangles and exploring where things could be located for commercial use. Also exploring where my cores would be located within the building.

Figure 100-102

- HALLWAYS
- ASSISTED LIVING ROOMS
- RENTAL OFFICE
- STAIRS
- COMMUNITY SPACE
- ELEVATORS
- LIVING SPACES



These are my communal living floor plan ideas. Exploring how things would be located and how the shape would impact the rooms within. Also seeing how the communal and assisted living spaces would interact with each other.

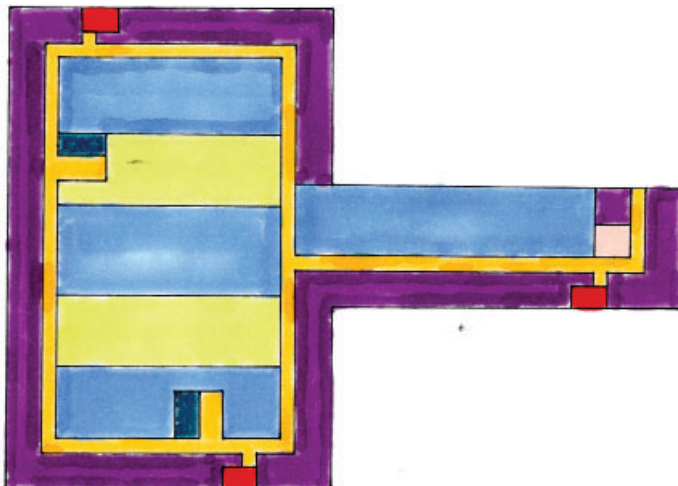
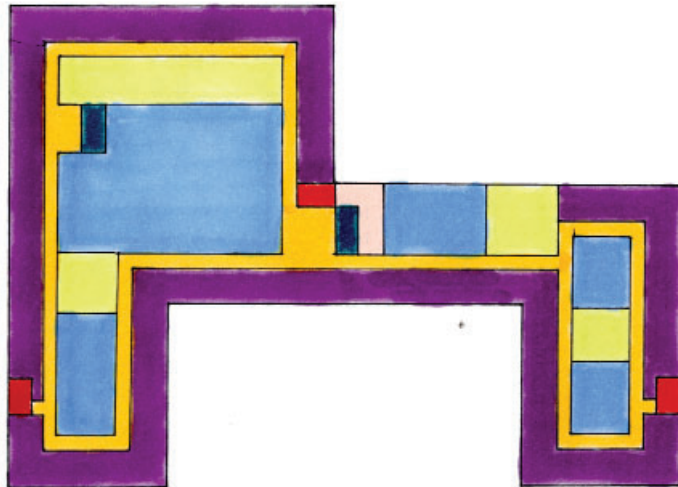
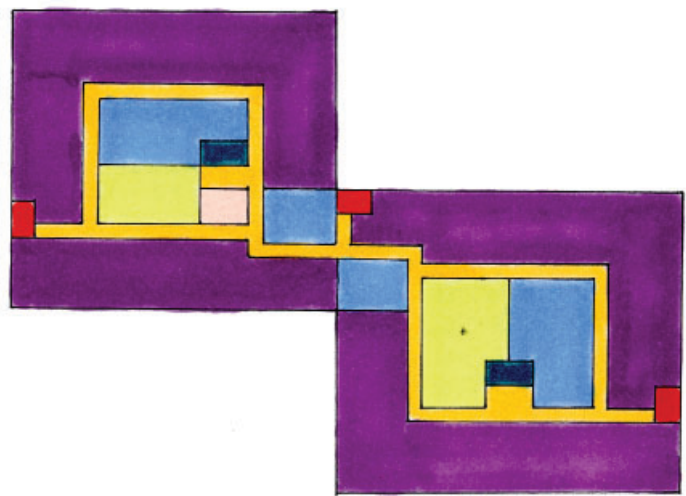


Figure 103-105

- HALLWAYS
- ASSISTED LIVING ROOMS
- RENTAL OFFICE
- STAIRS
- COMMUNITY SPACE
- ELEVATORS
- LIVING SPACES



Lastly for these drawings are the regular apartment floors. Showing how spaces would be used with the shape of the building.

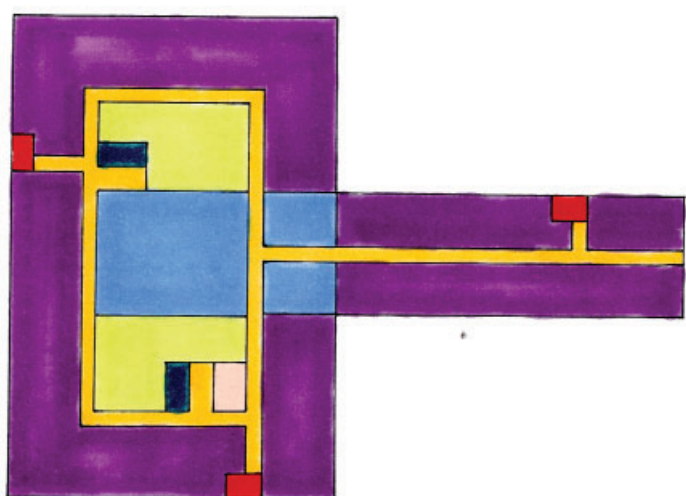
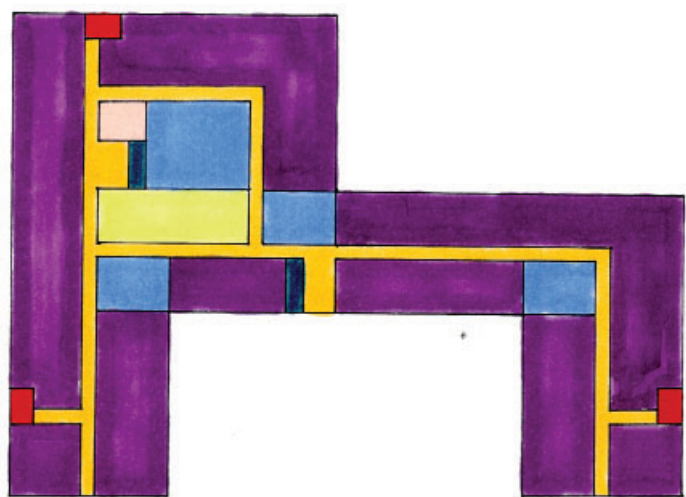
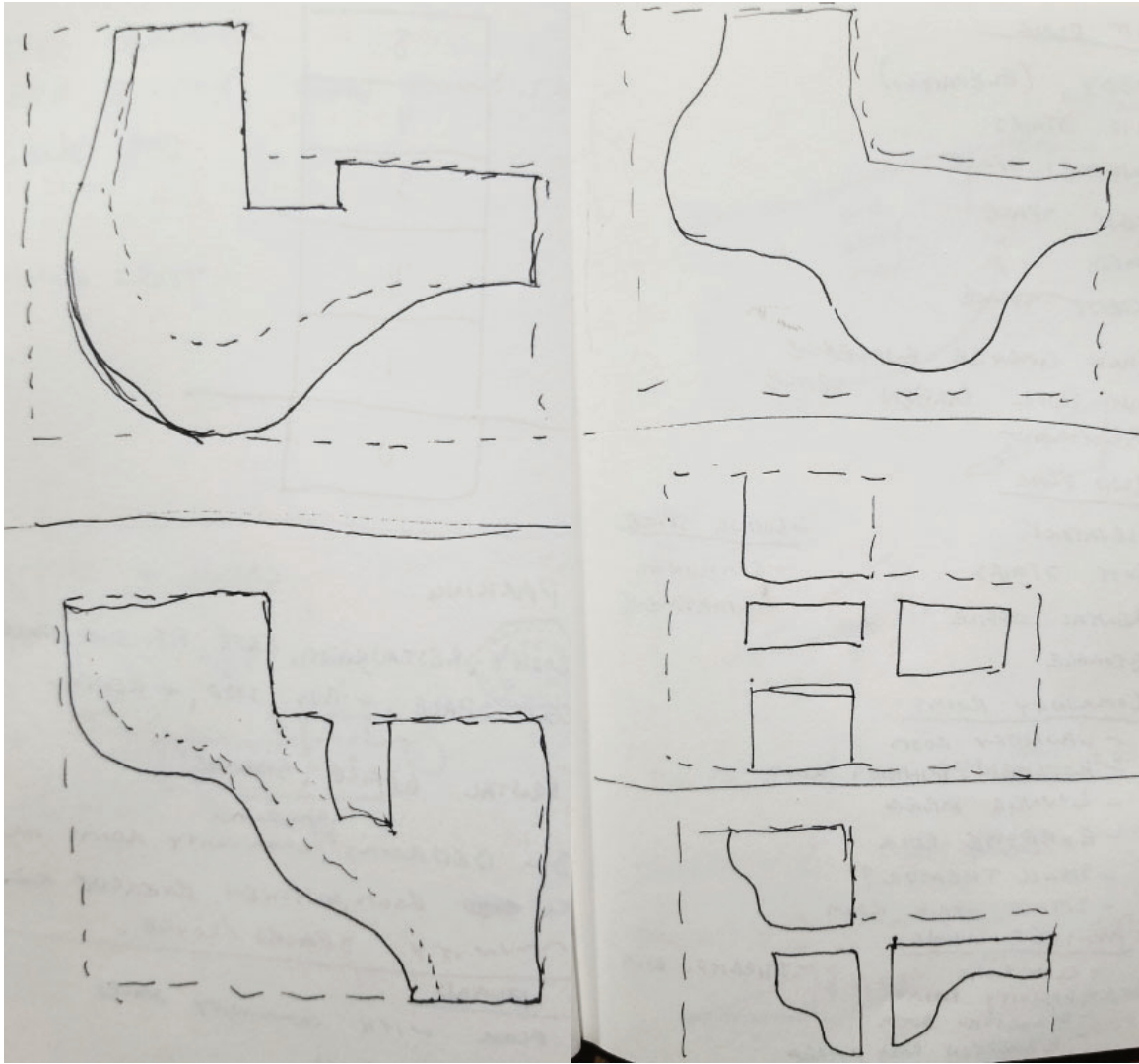
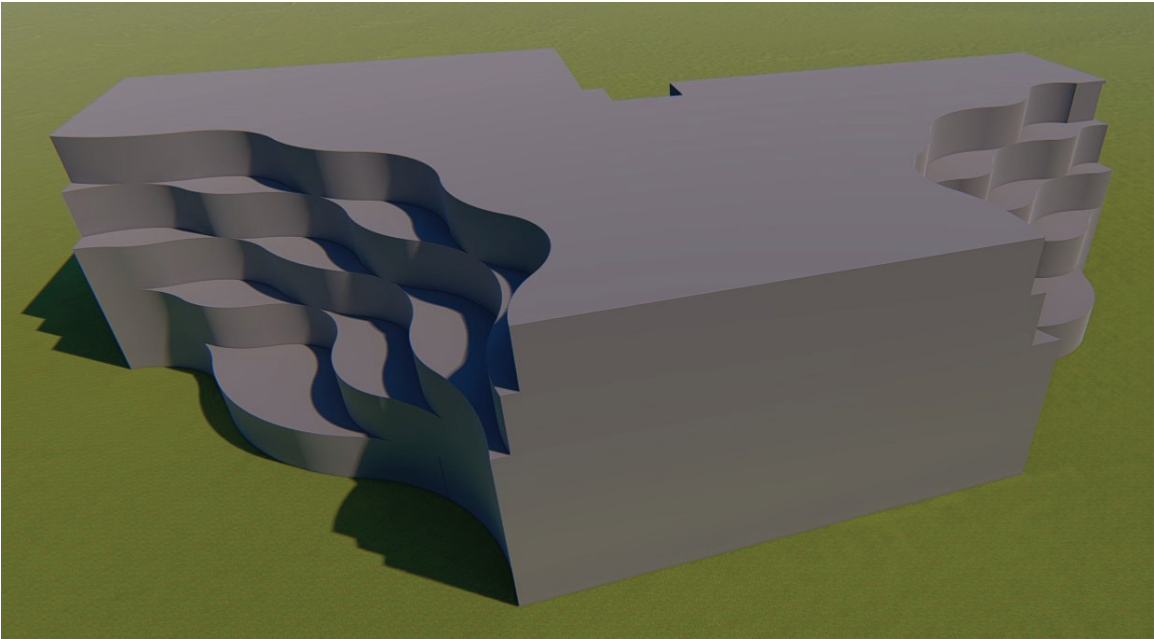


Figure 106-108



These are sketches of some of the ideas that I had for my building. I wasn't a fan of the square shape that I was working with earlier. A lot of the surrounding buildings around my site are very rectangular. Using curves I hoped to give attention to my building and make it look interesting and different from the ones in this area. I also like to use some type of curved element within my projects. Within these drawings you can see some cut outs for the garbage and recycling areas that already exist on this site. I also played around with ideas of having pathways through my building to give more circulation on the site.

Figure 109-110



I ended up with this space which uses both the curved idea and the squares. The building meets up with most of the edges of the site except for the two south corners and the north side of the building is recessed back a little to create a sidewalk on the back side of the building and to not tower over the house to the north of my site.

Figure 111



# Mid Term Critique

## Site Design

- Building Outline
- Green Space
- Raised Seating Area
- Raised Plant Guards
- Bus stop
- Bike Rack
- Underground Garage Entrance
- Garbage Area
- Sidewalk



## Main Floor

- Grocery Store
- Hufan Restaurant
- Restaurant
- Coffee Shop
- Event Space
- Bathrooms
- Lobby
- Mechanical Room
- Parking Ramp

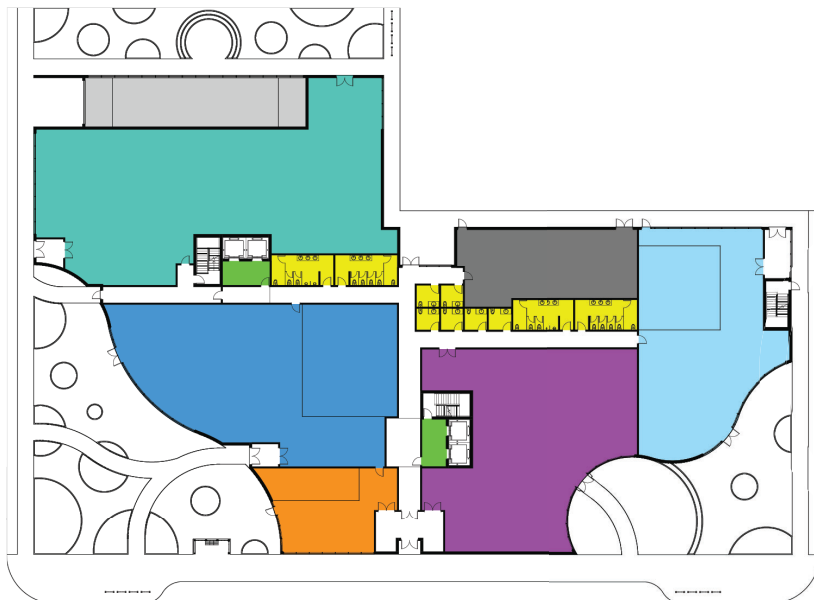


Figure 112-113

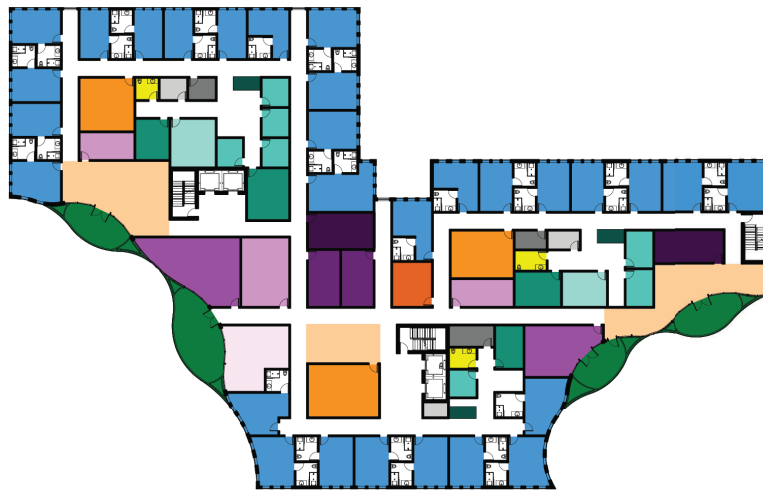
# Communal Living Floors

- Community Living Spaces
- Kitchen/Dining Room
- Lounge Area
- Laundry Room
- Classroom
- Community Flex Space
- Work Space
- Small Theater
- Green Roof Balcony
- Reception Desk
- Office/Work Space
- Exam Room
- Conference Room
- Bathroom
- Clean/Dirty Storage
- Storage
- Rental Office



Second Floor

- Community Living Spaces
- Kitchen/Dining Room
- Lounge Area
- Laundry Room
- Meditation Room
- Classroom
- Community Flex Space
- Work Space
- Exercise Room
- Green Roof Balcony
- Reception Desk
- Office/Work Space
- Exam Room
- Conference Room
- Bathroom
- Clean/Dirty Storage
- Storage

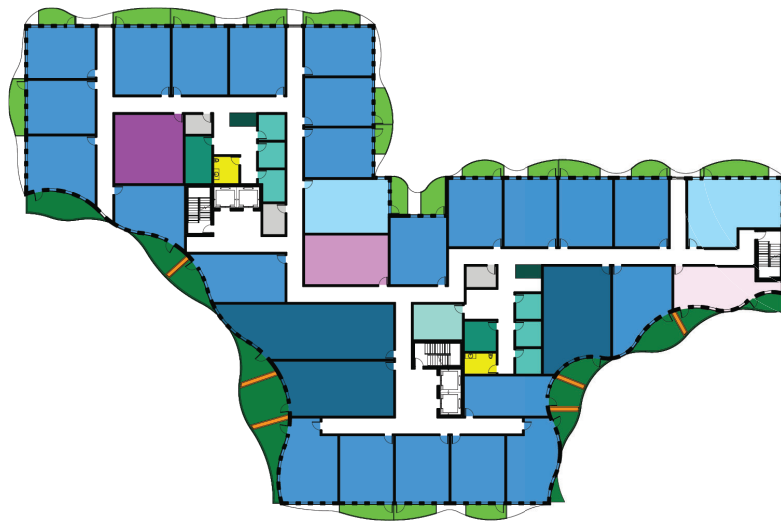


Third Floor

Figure 114-115

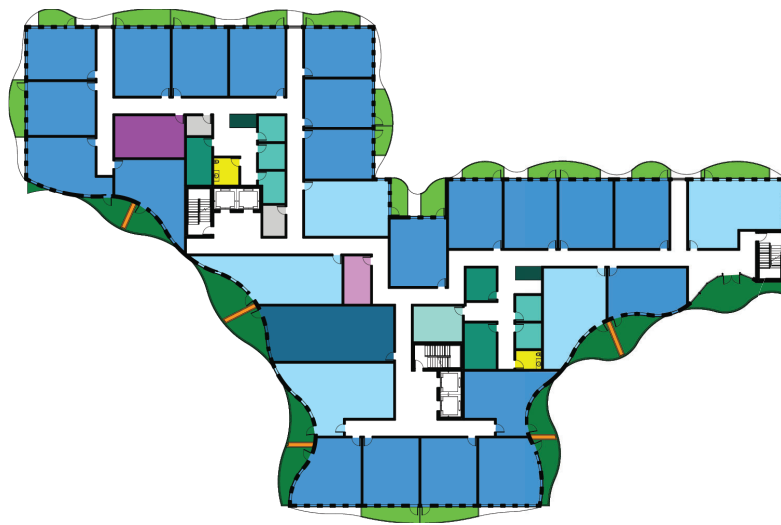
# Regular Apartment Floors

- Studio
- One Bedroom
- Two Bedroom
- Community Flex Space
- Work Space
- Exercise Room
- Green Roof Balcony
- Balcony
- Raised Plant Guards
- Reception Desk
- Office/Work Space
- Exam Room
- Conference Room
- Bathroom
- Storage



Fourth Floor

- Studio
- One Bedroom
- Two Bedroom
- Community Flex Space
- Work Space
- Green Roof Balcony
- Balcony
- Raised Plant Guards
- Reception Desk
- Office/Work Space
- Exam Room
- Conference Room
- Bathroom
- Storage

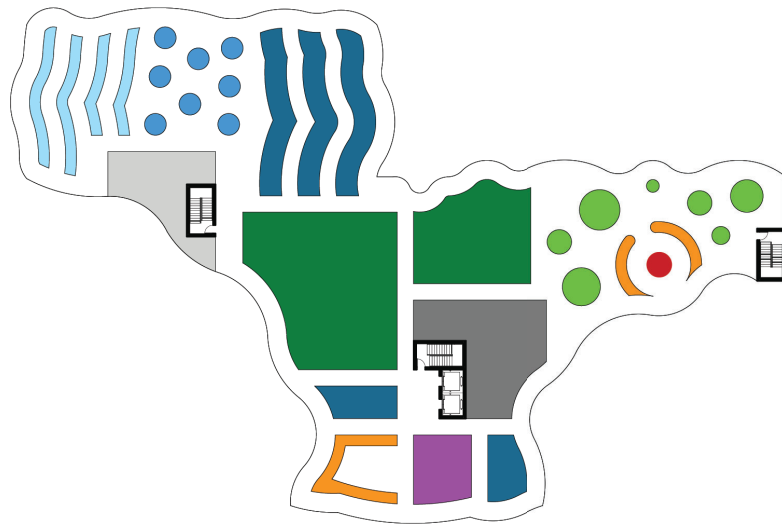


Fifth Floor

Figure 116-117

# Green Roof

- Flower Garden
- Fruit Garden
- Vegetable Garden
- Green Space
- Raised Seating Area
- Raised Plant Guards
- Fire Pit
- Grilling Area
- Mechanical Room
- Shed



# Elevations

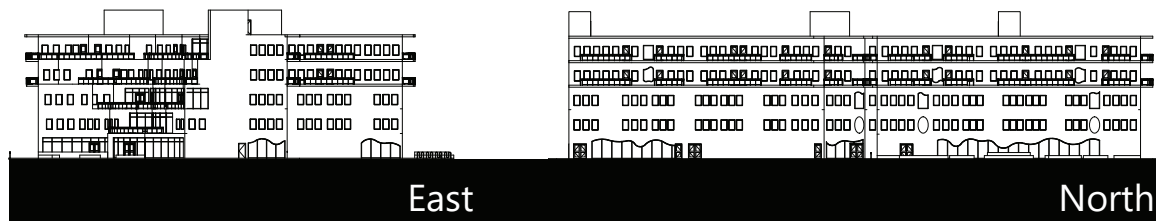
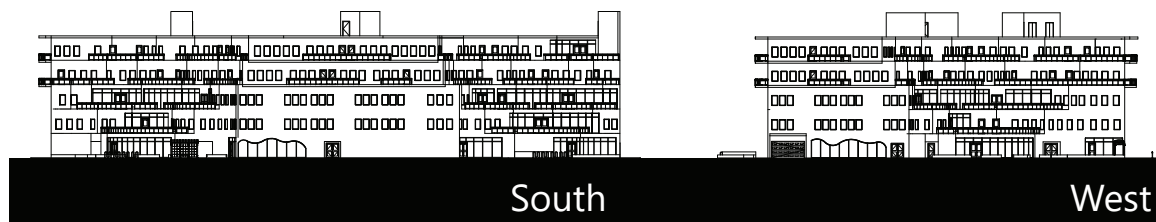


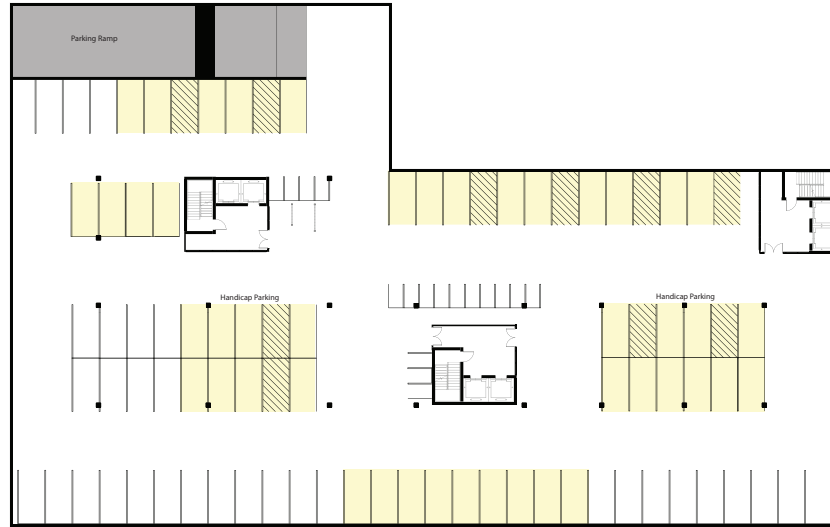


Figure 118-122









# Project Solution

## Under Ground Parking

-  Handicap Parking
-  Parking Ramp



## Ground Floor and Site

-  Green Space
-  Raised Green Seating
-  Seating Area
-  Commercial Spaces
-  Event Space
-  Lobby
-  Bathrooms
-  Other

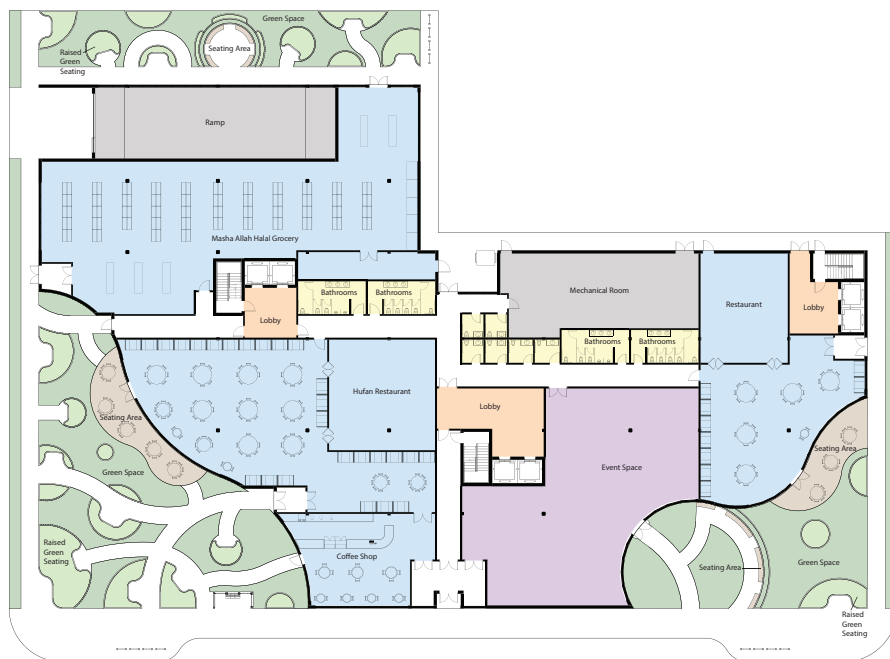


Figure 123-124

# Community Floors

- Bedrooms
- Community Spaces
- Balconies
- Assisted Living Spaces
- Other



Second Floor

- Bedrooms
- Community Spaces
- Balconies
- Assisted Living Spaces
- Other

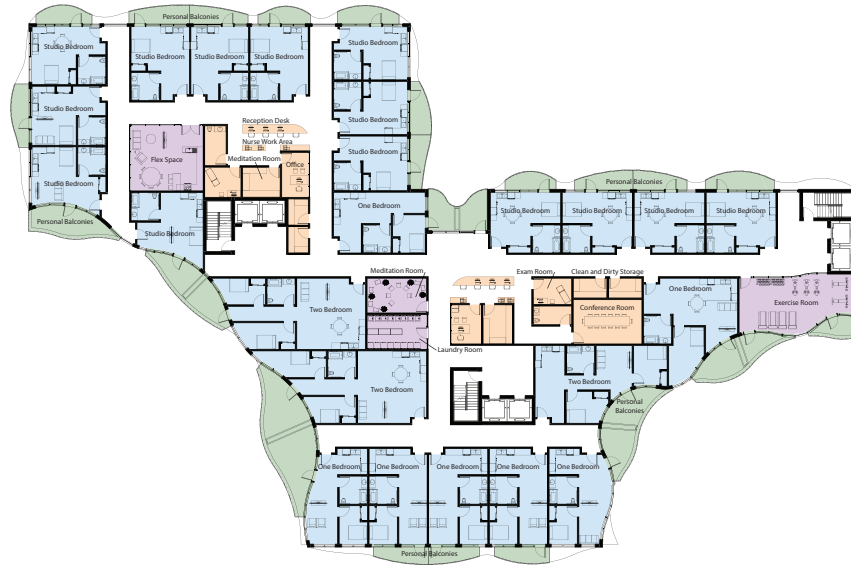


Third Floor

Figure 125-126

# Regular Apartment Floors

- Bedroom
- Community Spaces
- Personal Balconies
- Assisted Living Spaces



Fourth Floor

- Bedroom
- Community Spaces
- Personal Balconies
- Assisted Living Spaces

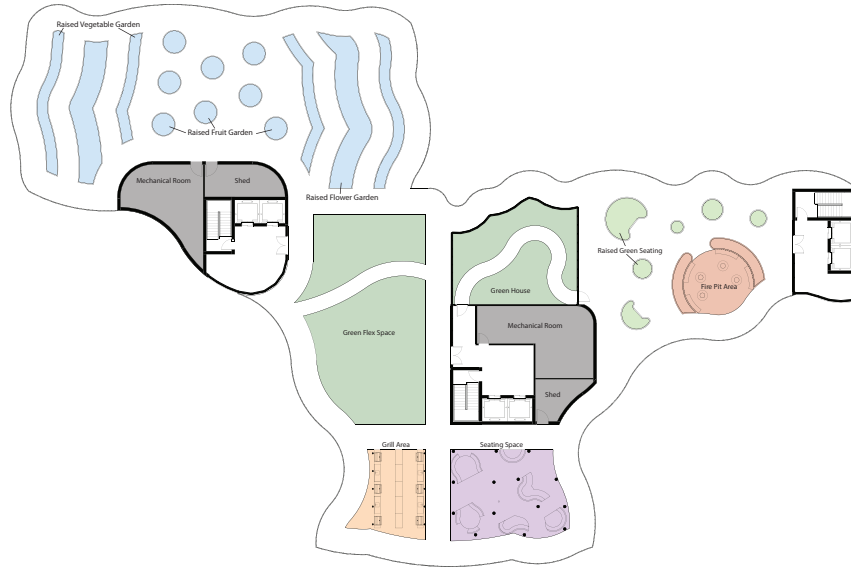


Fifth Floor

Project Solution

# Green Roof

- Raised Garden
- Green Space
- Grill Area
- Seating Space
- Raised Green Seating
- Fire Pit
- Other



**Project Solution**

# Elevations



# Sections

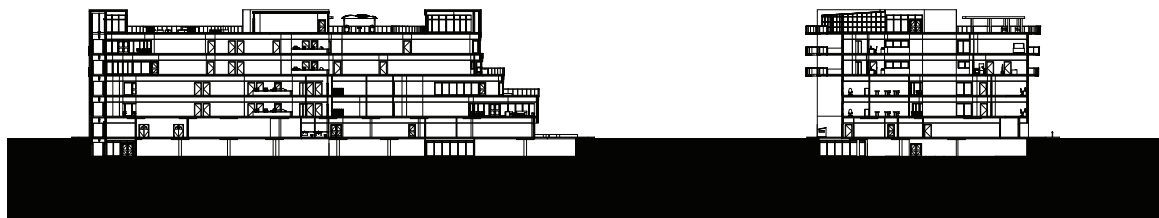


Figure 129-135



# Performance Analysis



This section is documentation of how this design has responded to various conditions specific to the site, research, and goals of this project.

Figure 136-141

# Response to Site



Here is my site which is located in Minneapolis, along E Lake Street between 13th and 14th Ave South. There is currently a pretty worn down parking lot and building located on my site that hosts a restaurant and cafe, a grocery store, an auto shop, and an adult daycare center. I brought some of these elements from the site into this thesis project including the restaurant and cafe, grocery store, and parking. The parking I moved from the surface to under my building. For the commercial uses which include a halal grocery store, hufan restaurant, a coffee shop I put on my main floor. I thought it was important to keep them within my building because there are a lot of cultural restaurants and stores along E Lake St and I didn't want to get rid of everything that already exists here. Lastly, building an assisted living building for young adults with disabilities on a site where an adult day care center already exists plays well with this project's typology.

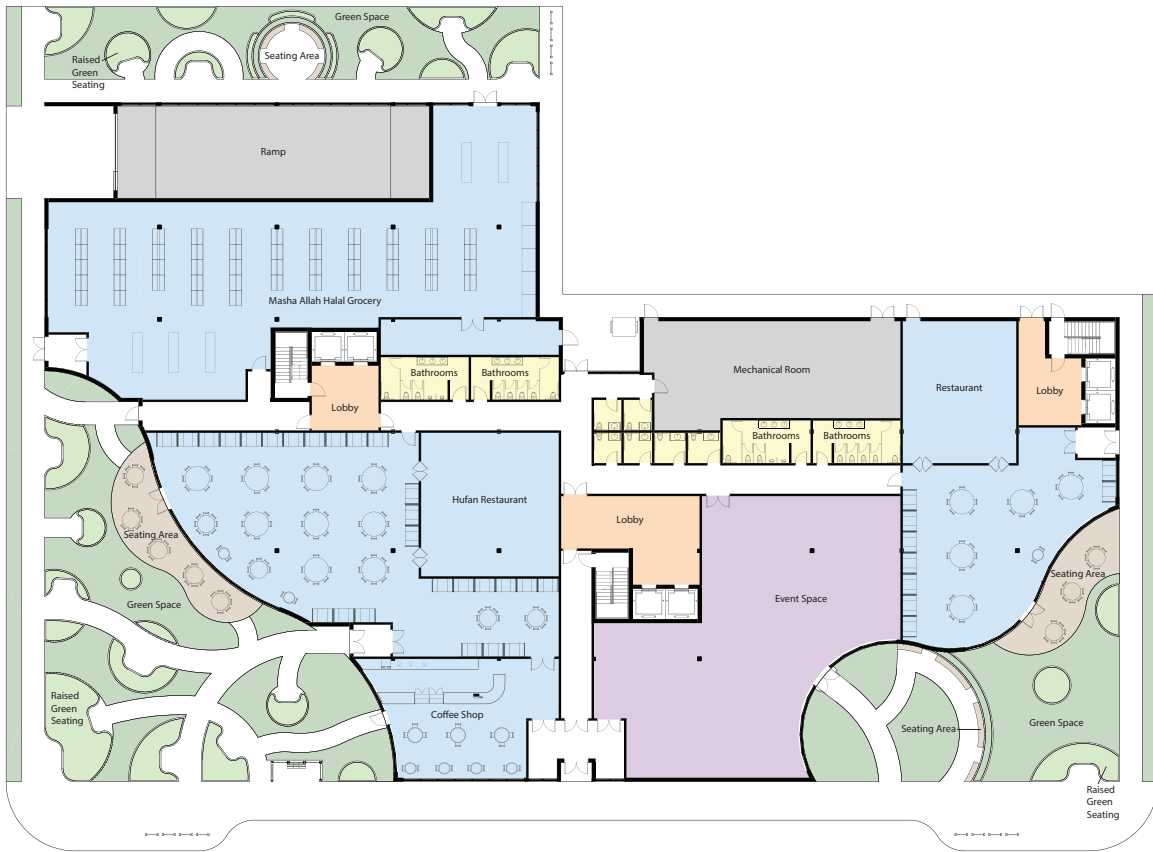
Response to  
Site

Figure 142



The form of the building is also influenced by the site. Most of the building is shaped by the site edges except for the two south corners of the building. The north side of the building is recessed back so it doesn't tower over the house and to also create a sidewalk along the backside of the building. There is also a square taken out on the north side of the building to leave room for the garbage and recycling area which was already located here on the existing site. With the form I also used curves because a lot of the surrounding buildings in this area are mainly rectangular and have a rigid look to them. By using curves I hoped to give attention to the site and building to try to give awareness of the people within the building. Having these curved elements on the most important corners of the building makes the site more inviting.

Figure 143

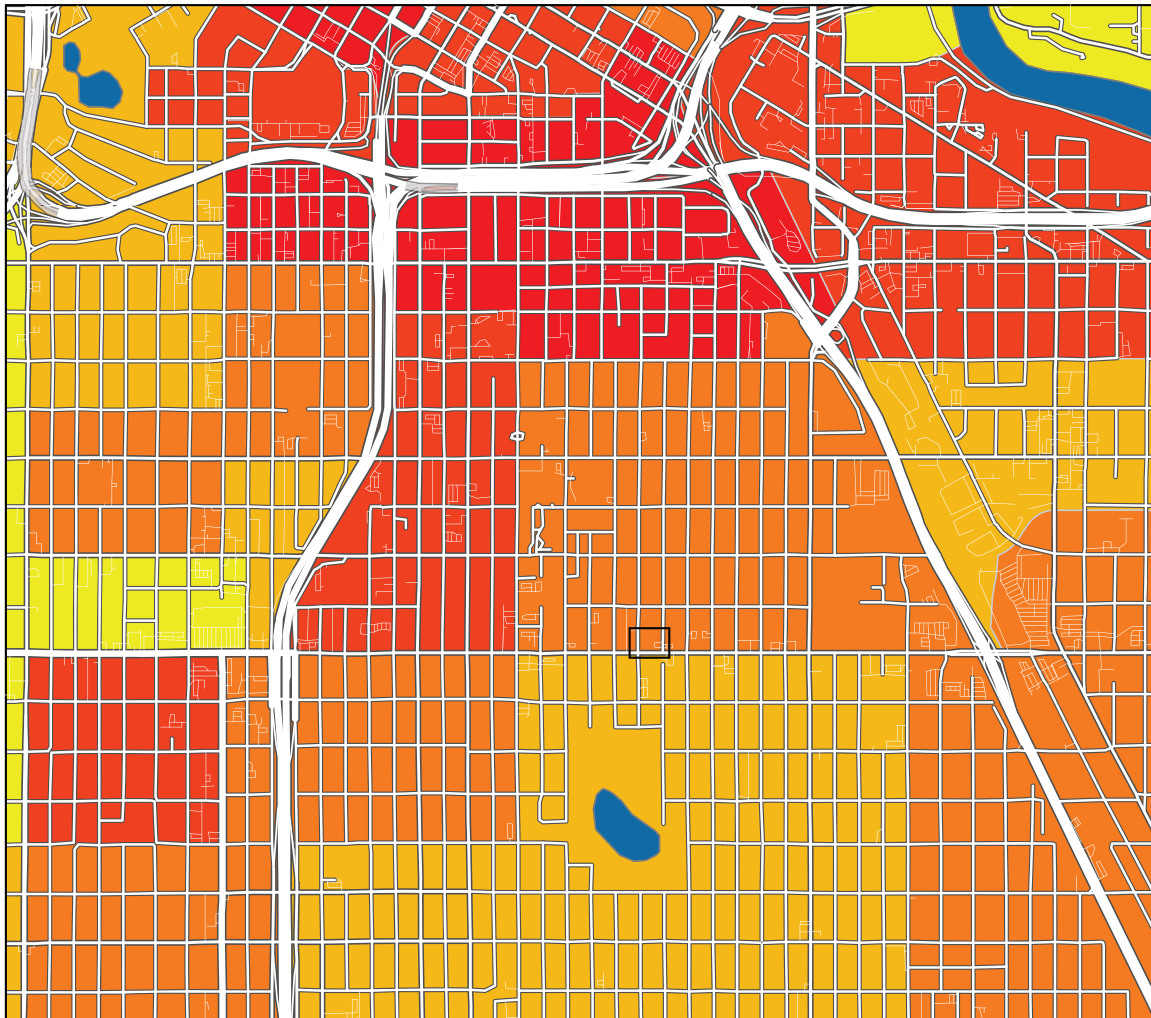


For my site I created these winding paths that lead into the building. There are also these circular raised seating areas which are at sitting height level, are also planters, and they have indents to fit a wheelchair or two. For seating there are also these more intimate seating spots that have raised plant guards to keep them somewhat private. While researching, I discovered that people with disabilities felt like they didn't have a lot of options when it comes to transportation. On the site there is a bus stop and bike racks, and they also have the option to drive themselves and park in the underground parking. I have these within my project to give them different options and opportunities.

Figure 144

# Response to Research

Response to Research



0 0.2 0.4 0.8 1.2 1.6 Miles

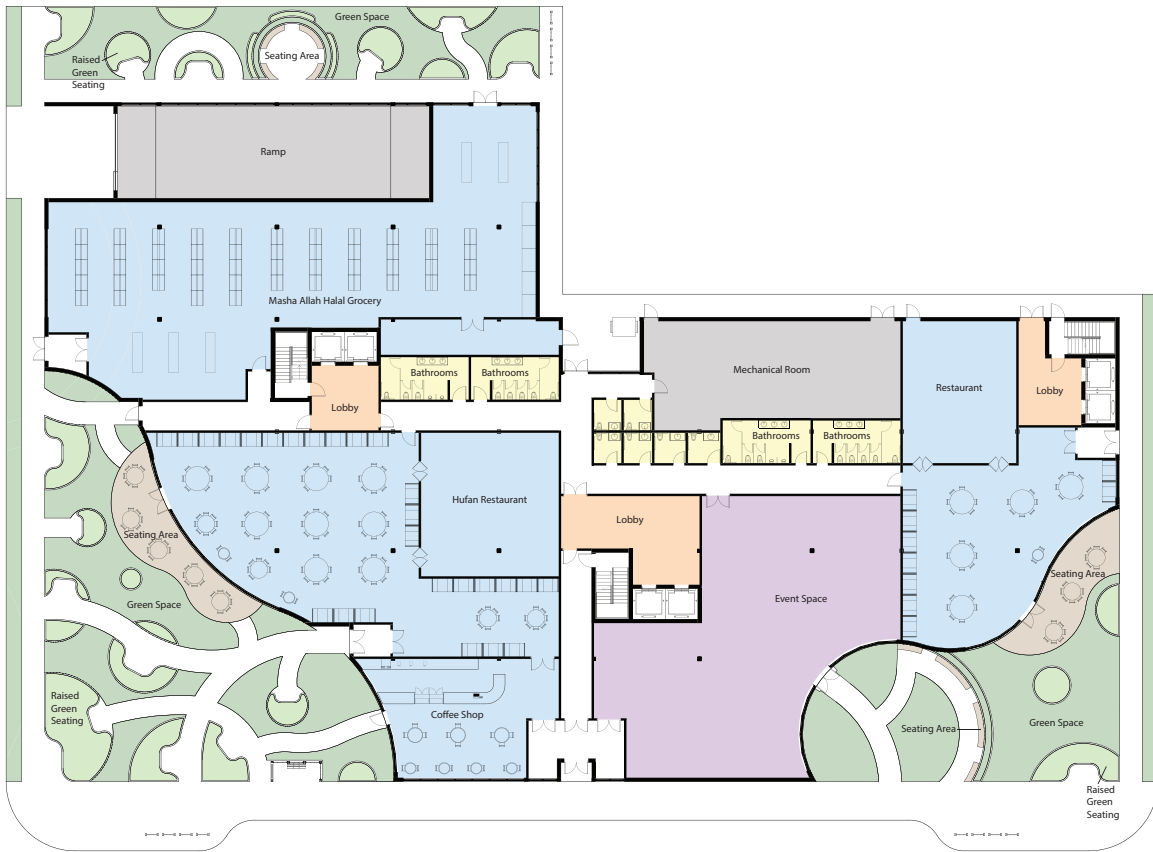
□ Site

## People with any Disability

- Less than 7.2%
- 7.3% - 10.8%
- 10.9% - 14.8%
- 14.9% - 20.0%
- 20.1% - 39.9%

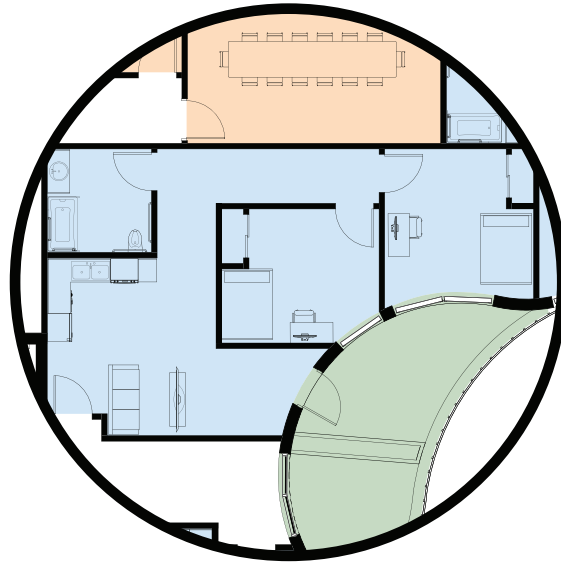
This image shows the area where my site is located. When I was researching about the percentage and population of people with disabilities in Minnesota, I discovered that Hennepin County has the highest population of people with disabilities. Using this information, I decided to locate my site here in Minneapolis.

Figure 145

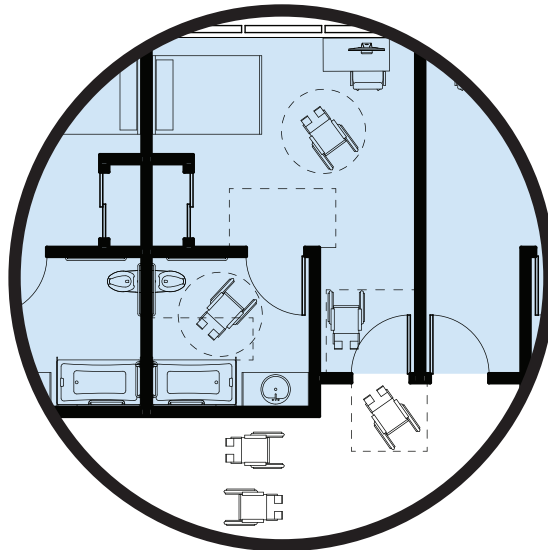


While researching, I discovered that people with disabilities felt like they didn't have a lot of options when it comes to transportation. On the site there is a bus stop and bike racks, and they also have the option to drive themselves and park in the underground parking. I have these within my project to give them different options and opportunities. Within the building on the main floor there is a halal grocery store, hufan restaurant, a coffee shop, an event space, another restaurant, bathrooms and lobby spaces, and the mechanical room. Researching about people with disabilities, they had a lot of trouble finding jobs. By having these different commercial spaces, I hope to give job opportunities for residents living within the building. There is also the event space which could be used for community events. Having people come within this building and interact with the residents, it makes them more involved with their area. This is another thing that I discovered within my literature reading that people with disabilities felt like they weren't a part of their communities. This also plays a role on the roof with the outdoor amenities.

Figure 146



On the fourth and fifth floors it's normal apartment rooms. Most of the rooms are studio bedrooms, but I did add a few one bedroom and two bedroom rooms. While researching about assisted living, some people wished they had the option for two bedrooms. Having a mix of communal living and different size apartments give the residents more variety to choose from.



For research, I looked at a lot of ADA Codes. Most of the building I tried to go above and beyond the minimums for codes. By doing this I hoped to design for the needs of the residents and not just accommodate them. Using the codes I looked at and applying them within my design.

Figure 147-148

# Response to Goals

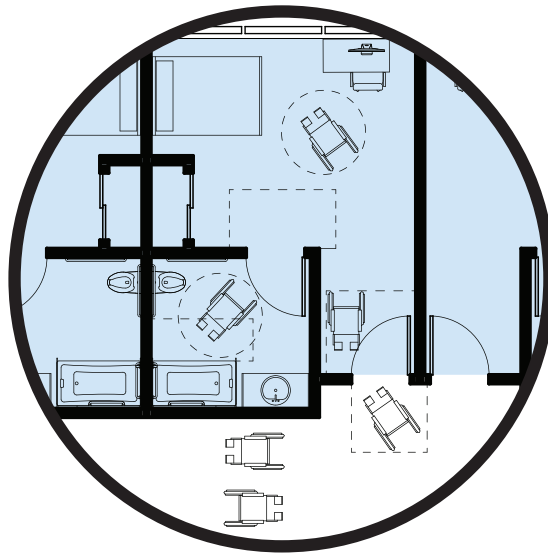
## 1. Intentional Design

-Following the Minnesota Building Codes, but mainly focusing on ADA Codes to design for the needs of people with disabilities who live here.

-Designing for the comfort for the people living within which involves giving them enough space to move around, making things accessible, and making their rooms feel like home.

-Correlating rooms that involve the residents be close to them.

-Having personal rooms and spaces be private.



In the circle is the personal bedroom which is about 315sq ft including the ADA bathroom. As one of my goals for this project was to go above ADA standards. The maximum turning radius in the bathroom is a little over 6ft which is about 20% more than the minimum. When it comes to the entrance hallway to the bedrooms, the width of it is 5' 9" which is 6% more than the minimum and the length is 7' 6" which is 50% more. These percentages might not seem like a lot, but for someone who needs the space to move around, it can mean everything. This also plays a role within the hallways of the building. The width of the hallways are 7' 6" which fits two wheelchairs comfortably and also gives some extra room to work with. I believe this best illustrates my first goal and how I designed for people with disabilities.



## 2. Sense of Community

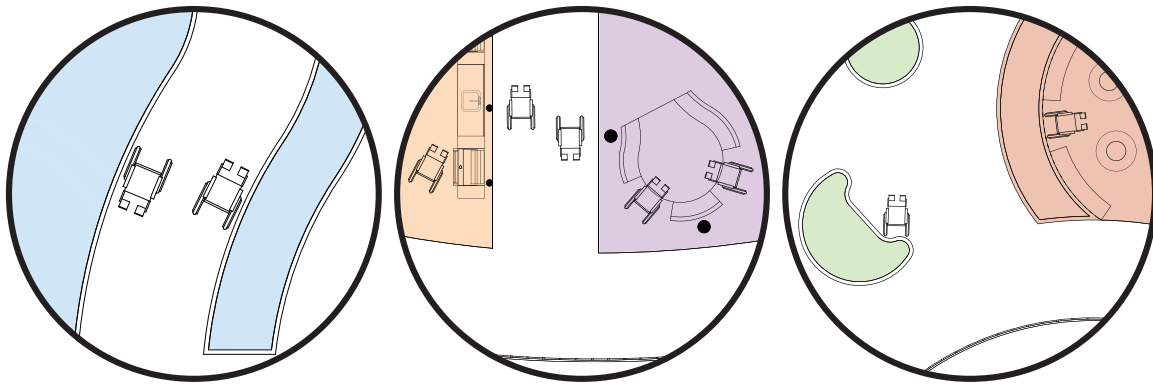
-Creating a community for the people living within the building by adding shared spaces like an exercise room, lounge, and community room with a small kitchen.

-Creating public spaces for others to be apart of that live in this community area.

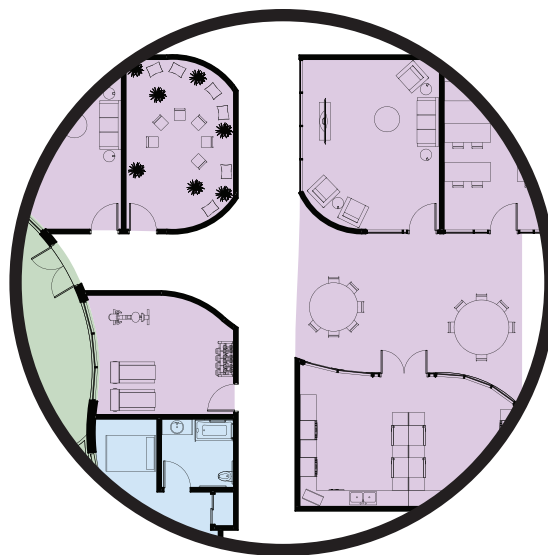
-Locate assistance rooms and staff in an area to be easily accessible to the residents to formulate a personal connection with the staff.



Another community area within my project is the community green roof. This green roof hosts different kinds of outdoor community spaces including: raised garden beds, green flex space, a green house, grill area, seating spaces, and a fire pit. Also there is a 8ft wide walking path all around the edge of the building for people to go around and enjoy the views. These amenities also demonstrates my first goal with designing around the comfort of people with disabilities.



Going more specifically into the designs of these roof amenities, the raised garden is specifically designed around people in wheelchairs. The height of the beds are at armrest height and the beds are in arms reach. In the first circle you can see the walking path between the beds fits two wheelchairs. I believe these little design decisions are important and do more than just accommodate people with disabilities. The next area that is designed for people in wheelchairs is the grill area. In the grilling area there are table tops that are lower for people in wheelchairs. In the second circle you can see in the seating area there are spots for people in wheelchairs to sit at the table. In the last circle, the image demonstrates other areas for people in wheelchairs to be a part of.



In this circle shows some of the community spaces. These spaces include flex spaces, meditation room, an exercise room, classroom, open lounge, kitchen, and a balcony. There are also other community spaces within the building including: work spaces, a small theater, and laundry rooms. Having plenty of shared spaces promotes more socialization between the residents. This also gives them the opportunity to have others to learn from and to assist each other.

Figure 151-154

### 3. Opportunities for People With Disabilities

- Creating spaces for people with disabilities to learn life skills including cooking, cleaning, saving money, etc.
- Jobs opportunities
- Transportation options
- Social connections to promote socializing



Stated on other pages there are plenty of spots that reach and meet these goals for opportunities for people with disabilities. One that probably isn't clear at this point is the spaces for people to learn life skills. These spaces would be mainly on the second and third floor in the community spaces. They have the opportunities to learn how to cook within the kitchen areas. They can learn how to save money within the classrooms and how to manage their finances. They can also be taught how to clean within their rooms. This picture I showed of the fire pit area demonstrates another area for social connections. A lot of these areas have already been explained on the previous page.

#### 4. Aesthetics

- Create a building with an unique shape, that is inviting, and has an easy access of entering and exiting.
- Having green space within the building as well as outside.
- Providing maximum amount of daylight to provide a warmer feeling.



Response to  
Goals

Figure 156-157

## 5. Mindset

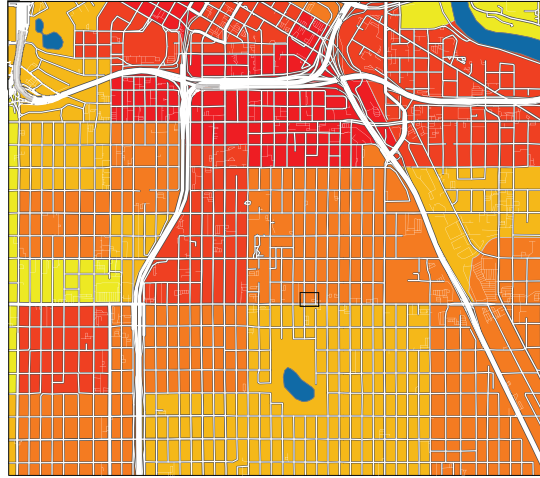
- Create an environment that is fun and interactive instead of sad and gloomy.
- Having the transition from institutionalization to a community setting provide more benefits to the residents.
- Also breaking bad stigmas that goes along with disabilities.



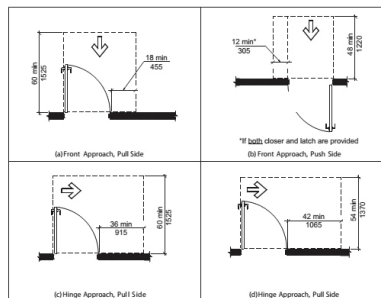
Having a lot of community spaces I hoped to make this environment fun and interactive. I think this is really apparent when you look at the community green roof which supplies multiple activities and opportunities for fun events. These social and communal spaces were created to bridge a connection between the assisted living workers, the residents, and people in the community. These spaces of overlap between residents and other users of the building will provide greater opportunity for those with disabilities to be independent and the community to understand and normalize disability instead of just accommodating it.

Figure 158

# Critique of Applied Research



When I was looking for my site, I used quantitative research which really helped to identify where I wanted to build my project. This was really successful I believe because it helped me locate my site in an area where there is a high population of people with disabilities.



For researching about ADA Codes I used descriptive research. Having this information was critical for this project since the building is for people with disabilities.

Lastly for my literature review I looked at a survey that was done on people with disabilities. Using their information of what they felt like they needed, I used it within my project to give them the opportunities that others felt like they didn't have.

# Digital Presentation



Here are my digital presentations slides. Most of what was said in these slides has been stated above.

# Independence For Young Adults With Disabilities



Figure 162



# Goals

Intentional Design



Sense of Community



## Opportunities For People With Disabilities

Aesthetics



Mindset



Figure 163

# Site Research

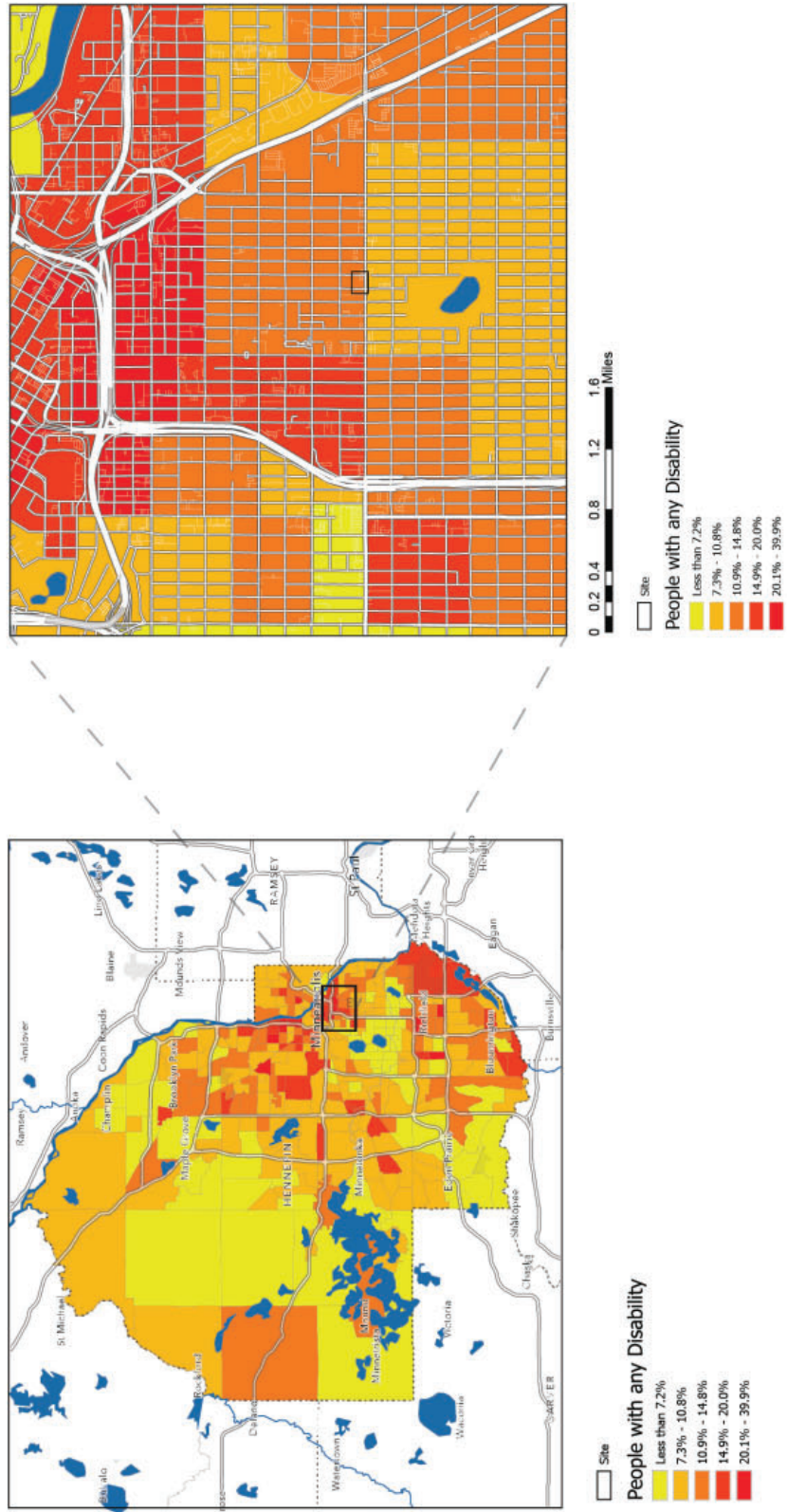


Figure 164

# Site & Form

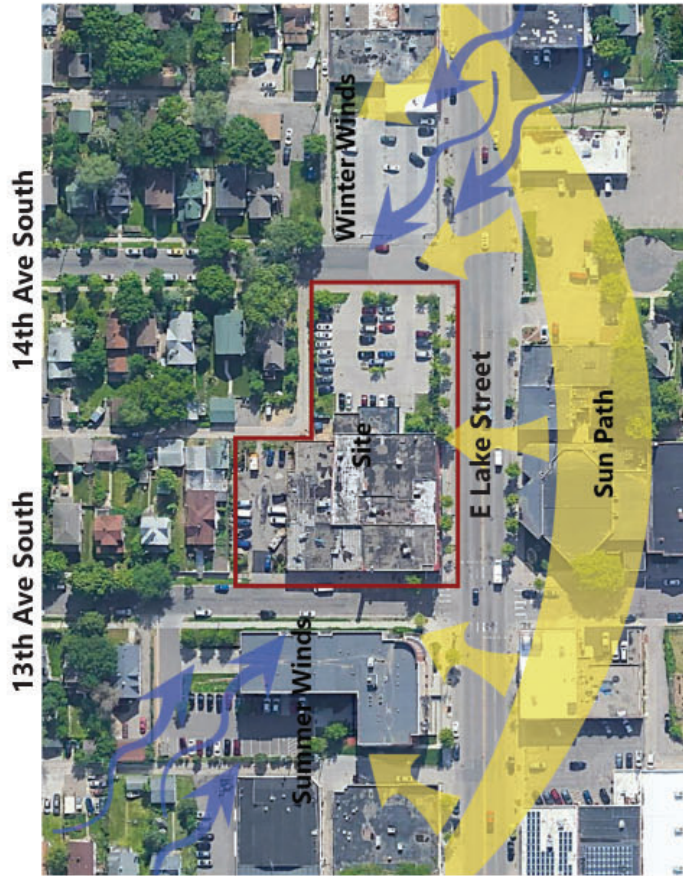


Figure 165

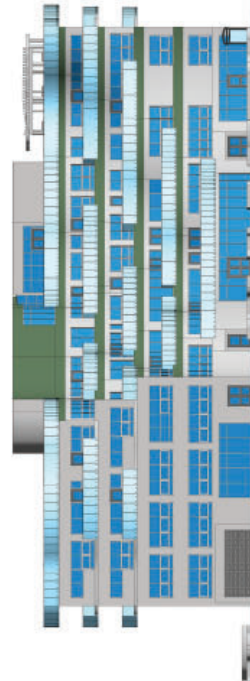
# Elevations



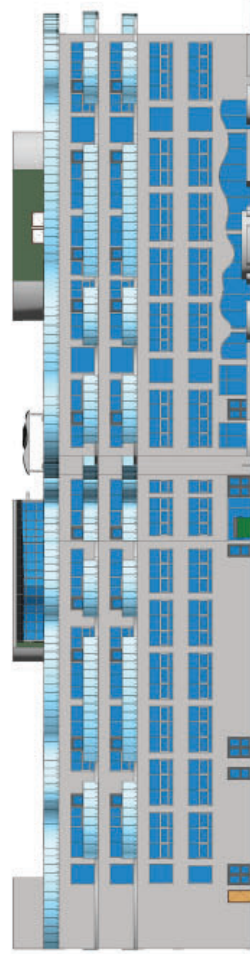
South Elevation



East Elevation



West Elevation



North Elevation

# Ground Floor

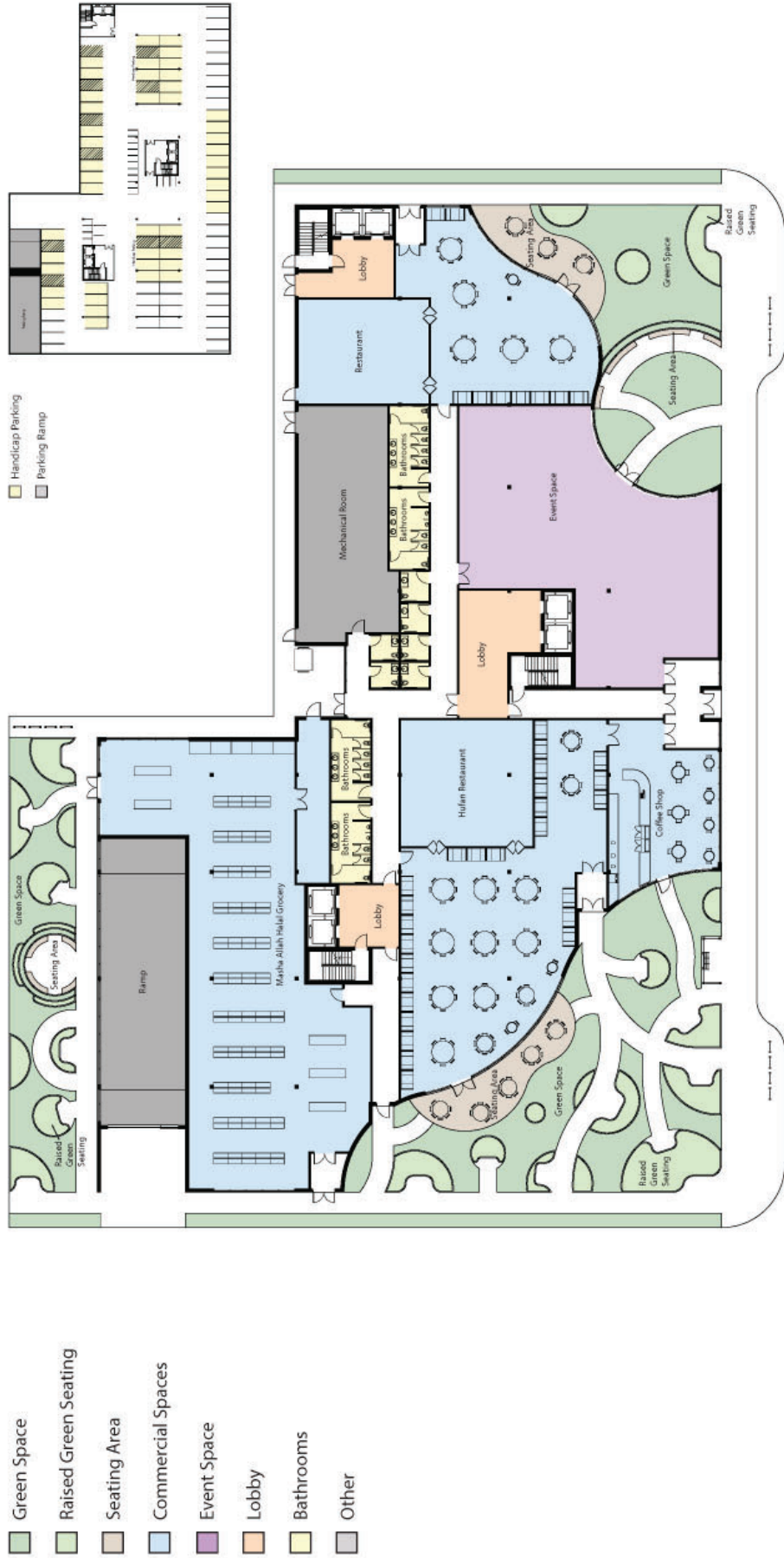
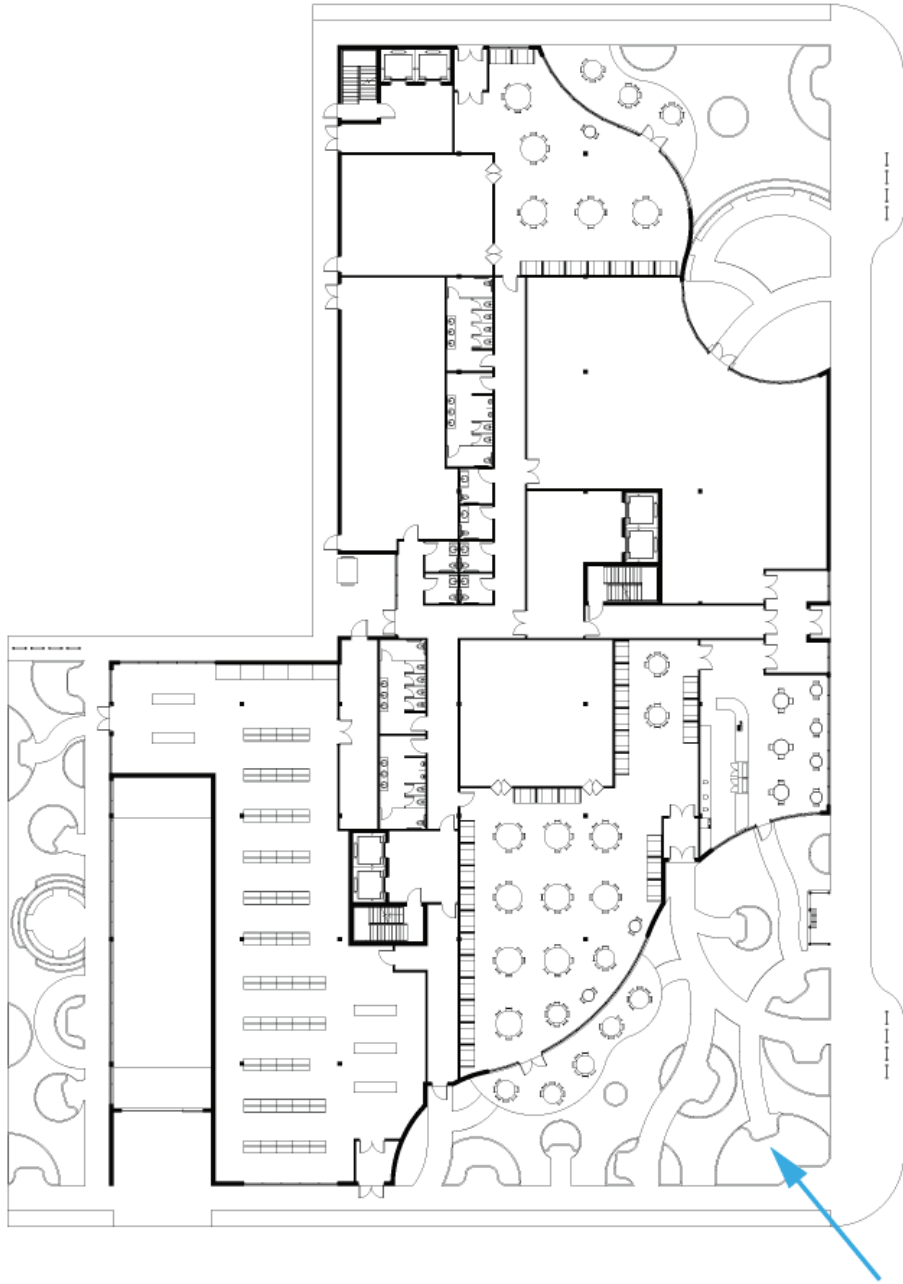


Figure 167

# Ground Floor



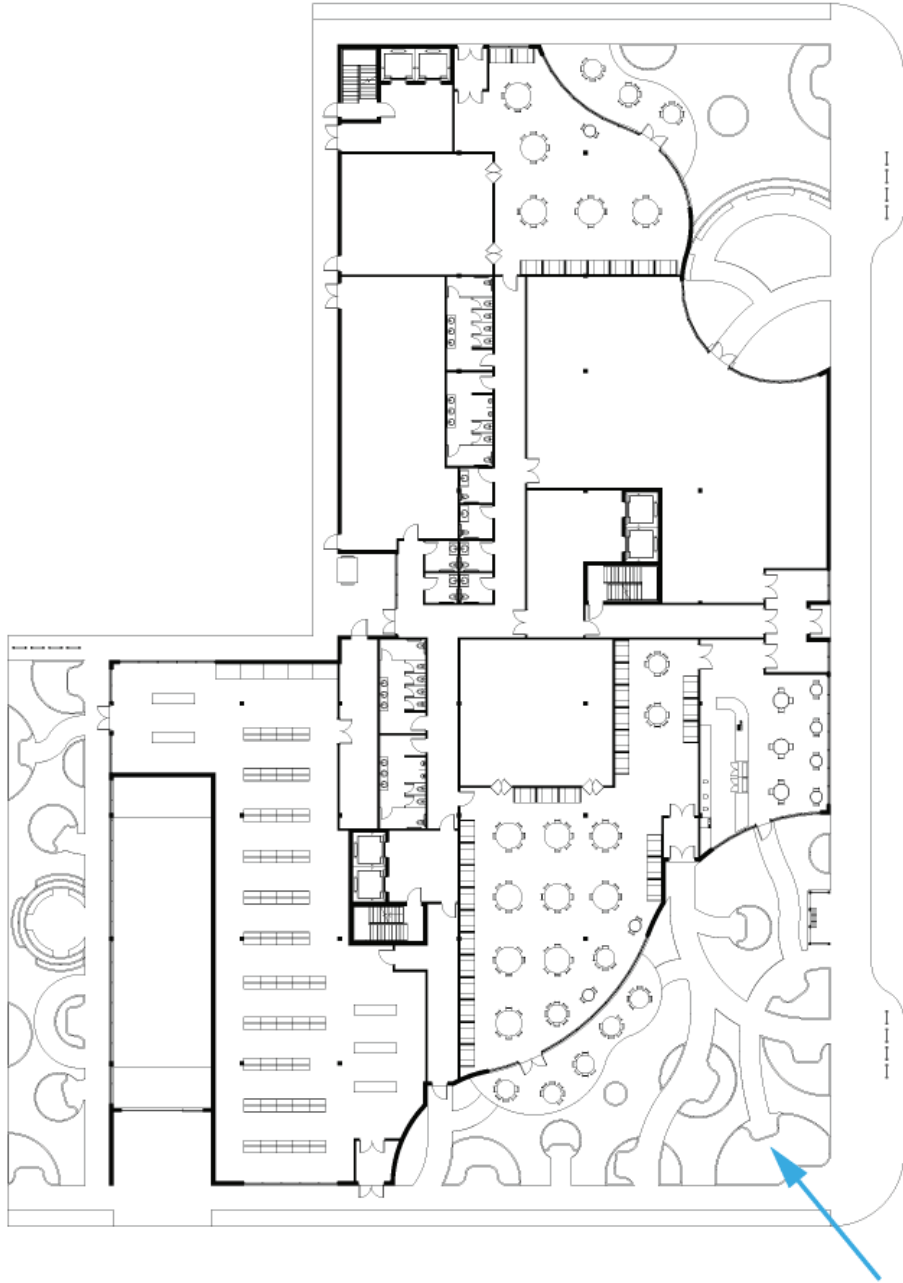
Digital  
Presentation

Figure 168



Figure 169

# Ground Floor



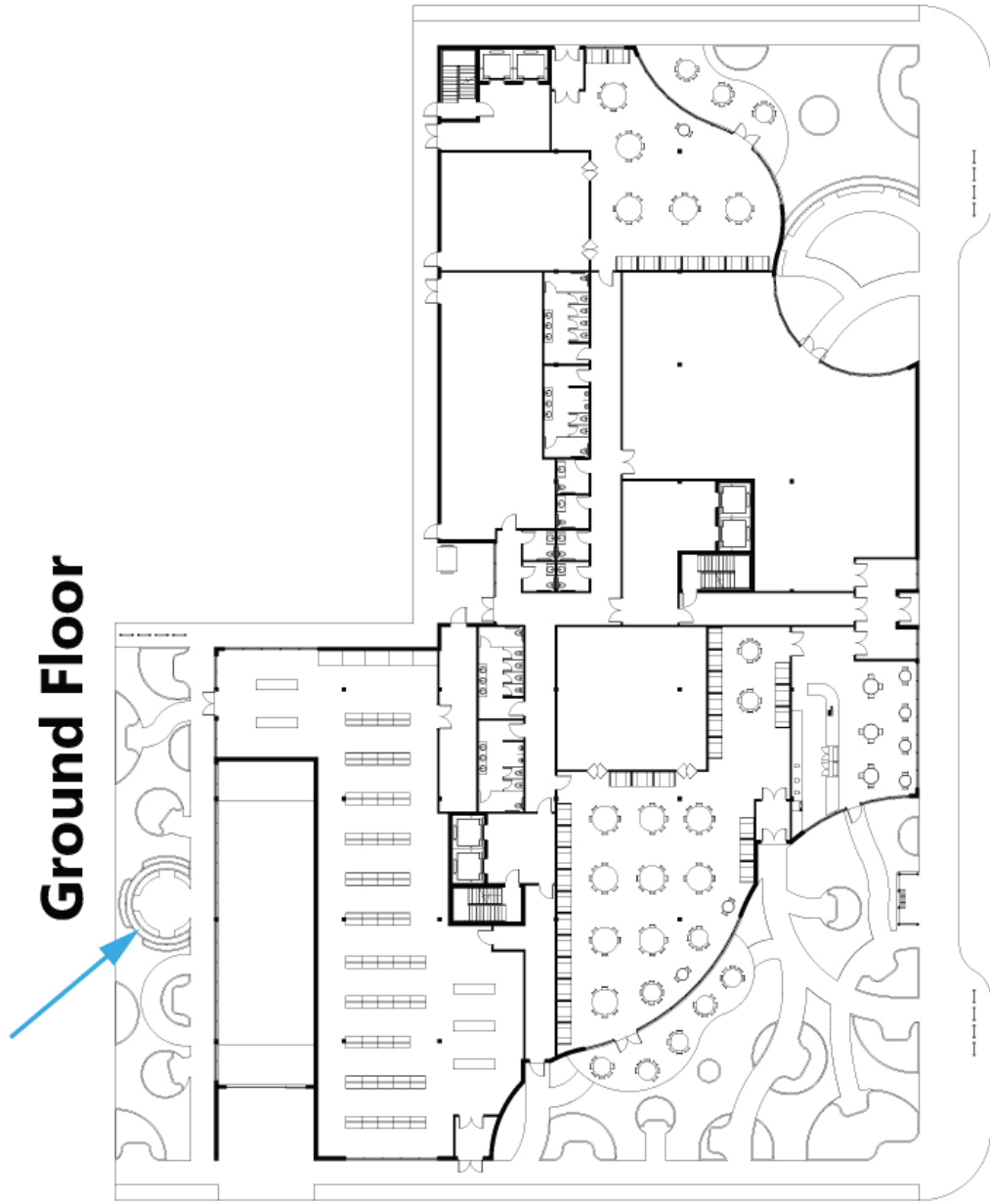
Digital  
Presentation

Figure 170





Figure 171



**Ground Floor**

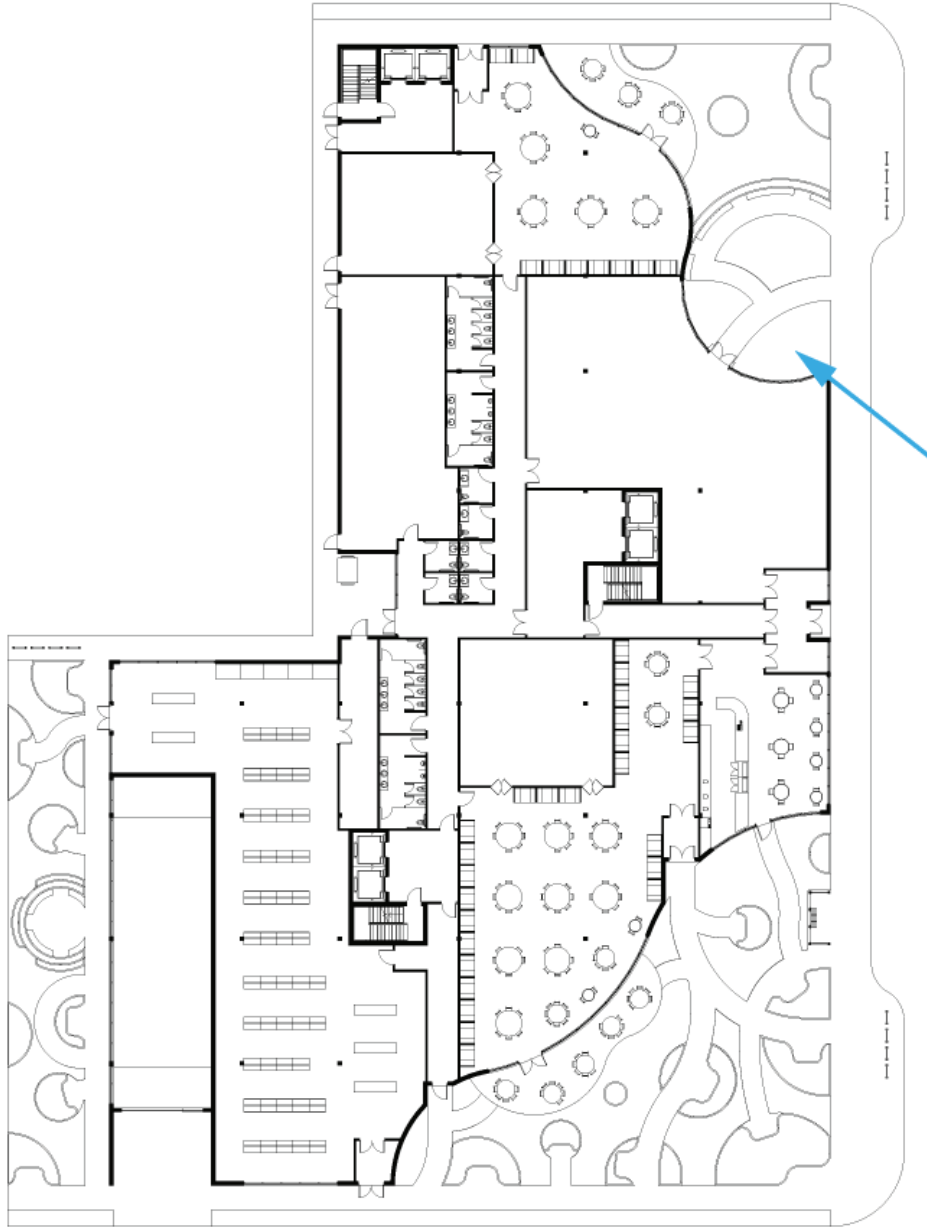
**Digital  
Presentation**

Figure 172



Figure 173

# Ground Floor



Digital  
Presentation

Figure 174



Figure 175

# Second Floor



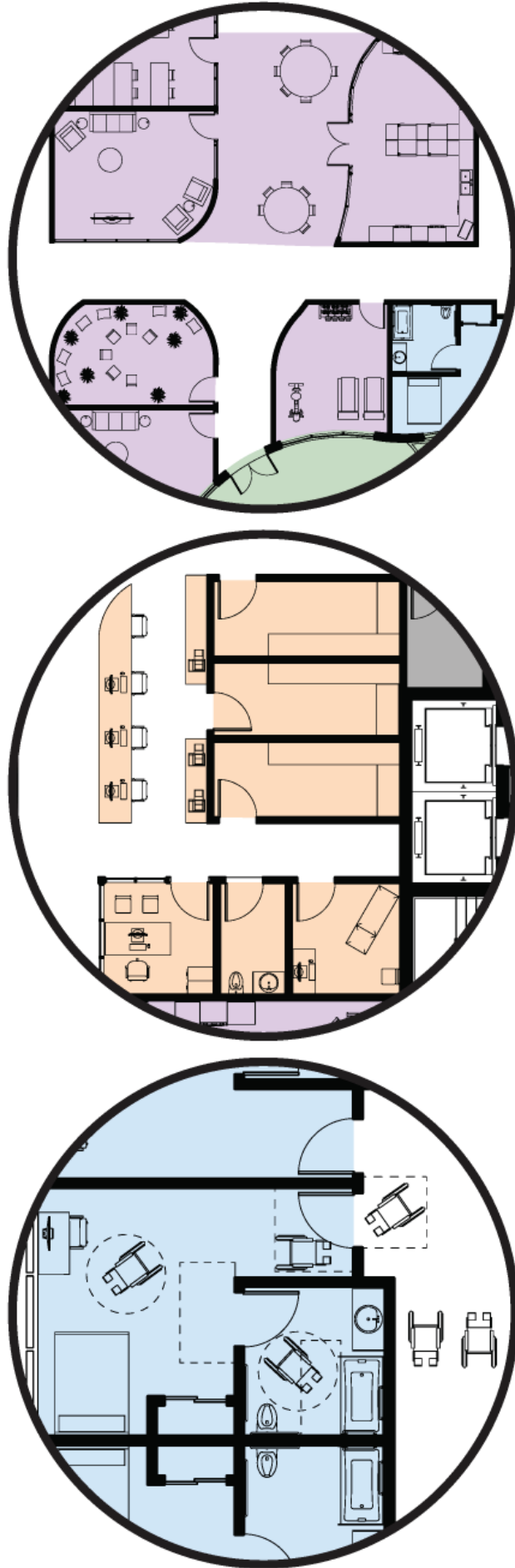
Figure 176

# Third Floor



Figure 177

# Communal Living Floors



Bedroom

Assisted Living

Community Areas

Figure 178



# Third Floor



Figure 179



Figure 180

Digital  
Presentation

## Second Floor



Figure 181



Figure 182

## Second Floor



Figure 183



Figure 184

## Second Floor



Figure 185



Figure 186

**Digital  
Presentation**



# Fourth Floor



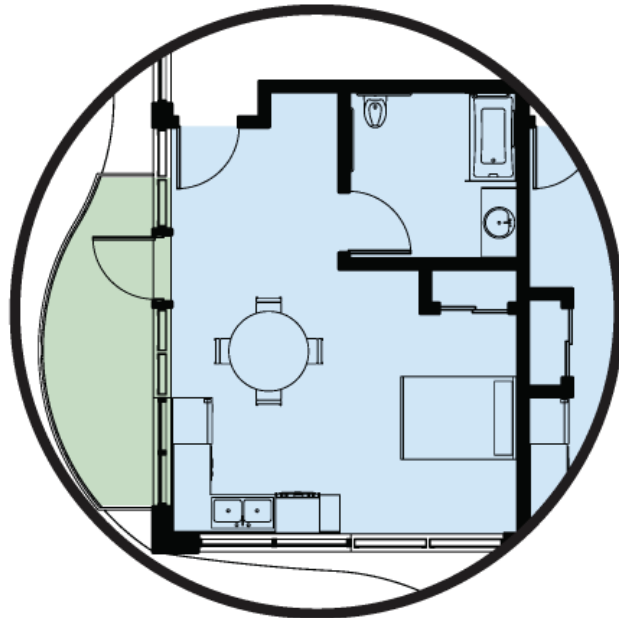
Figure 187

# Fifth Floor

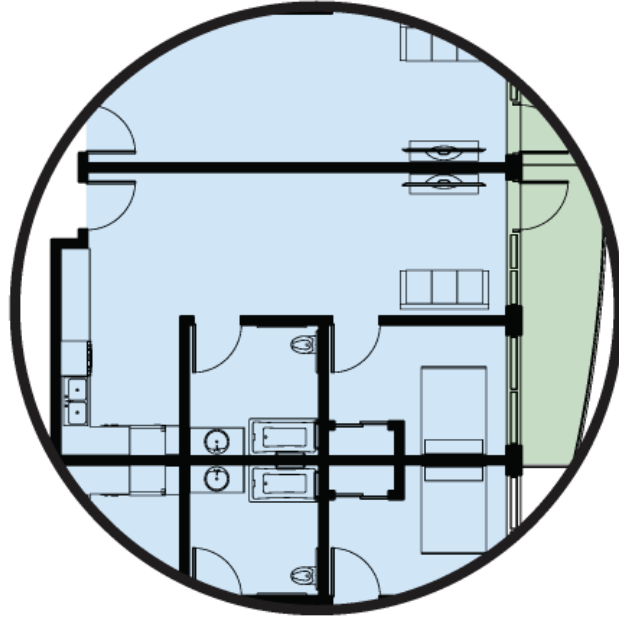


Figure 188

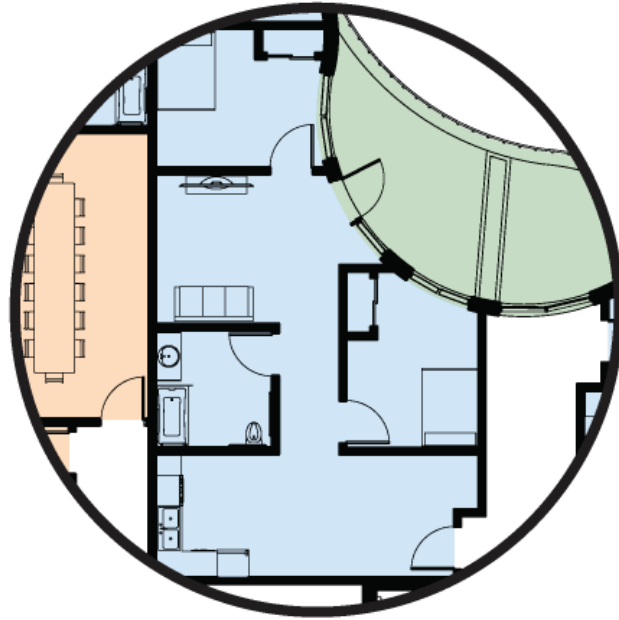
# Apartment Floors



Studio



One Bedroom



Two Bedroom

Figure 189

## Fourth Floor



Digital  
Presentation

Figure 190



Figure 191

## Fourth Floor



Digital  
Presentation

Figure 192



Figure 193

## Fourth Floor



Digital  
Presentation

Figure 194





Figure 195

## Fourth Floor



Digital  
Presentation

Figure 196



Figure 197

# Roof

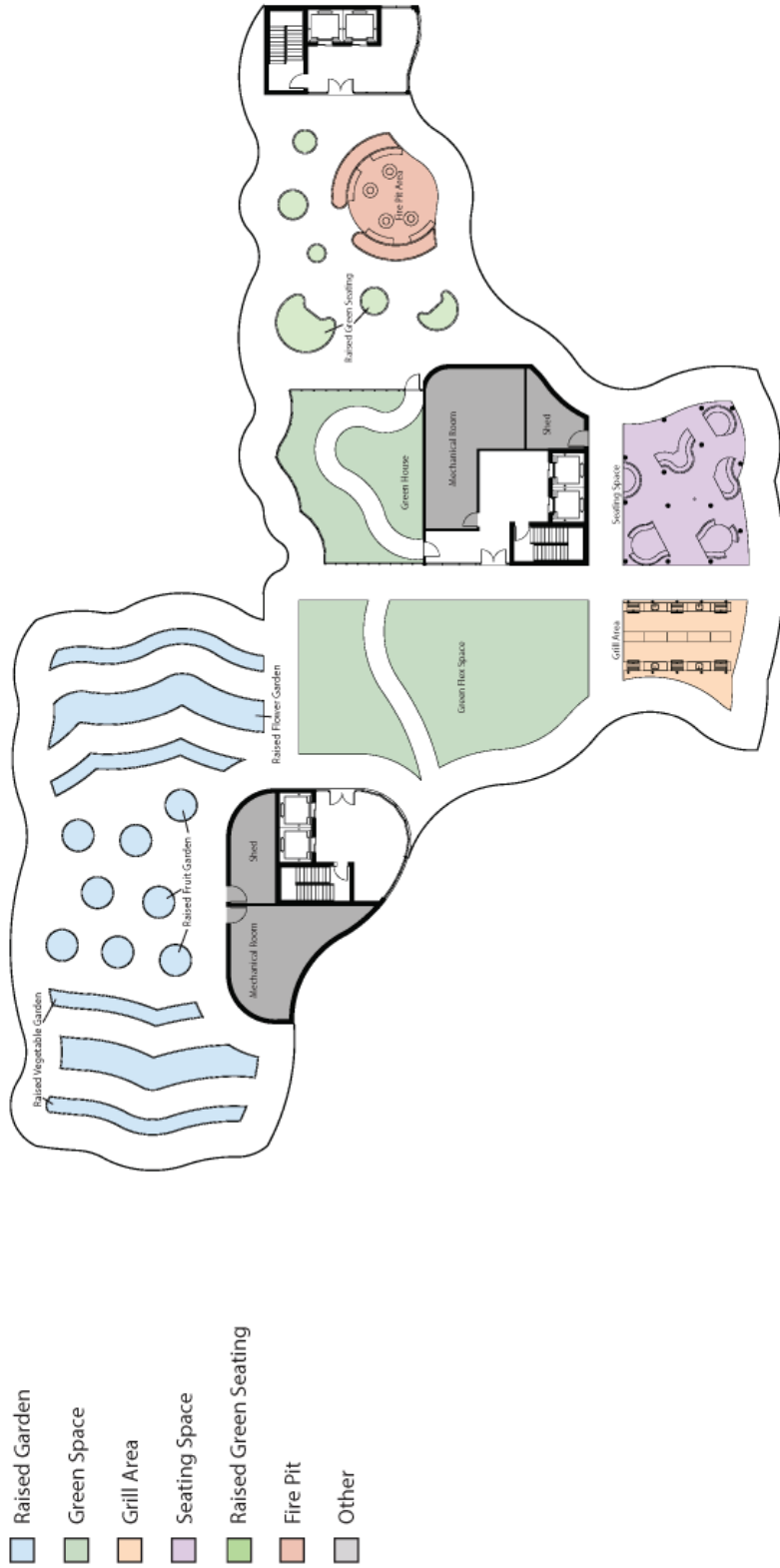
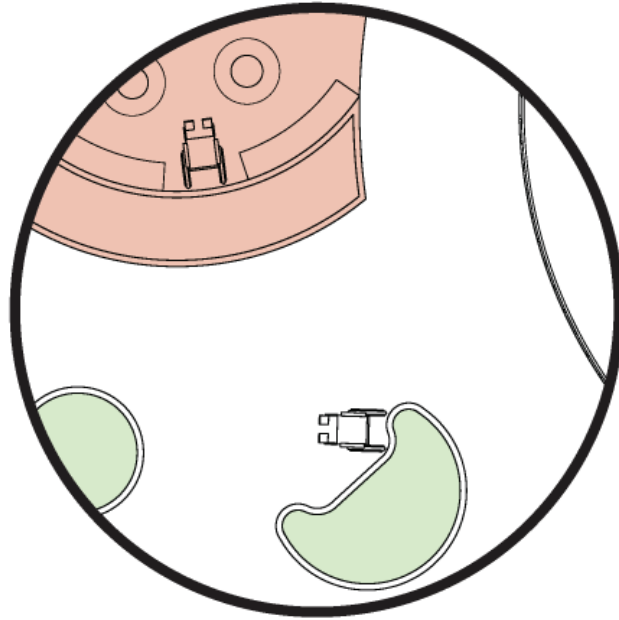
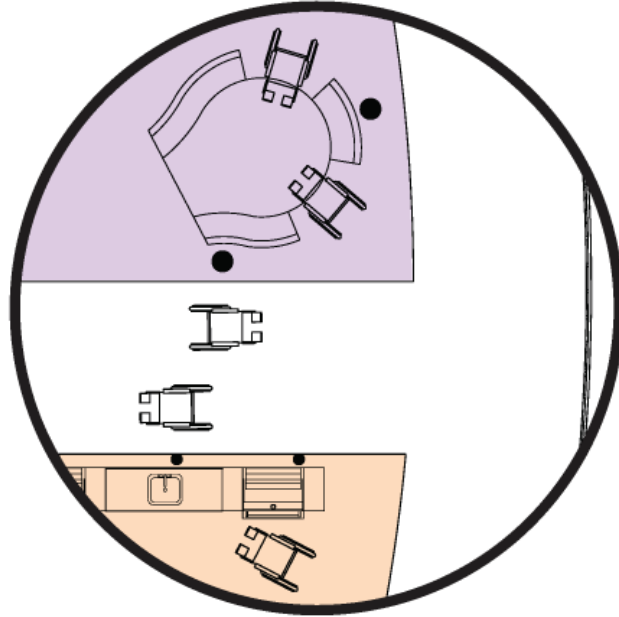


Figure 198

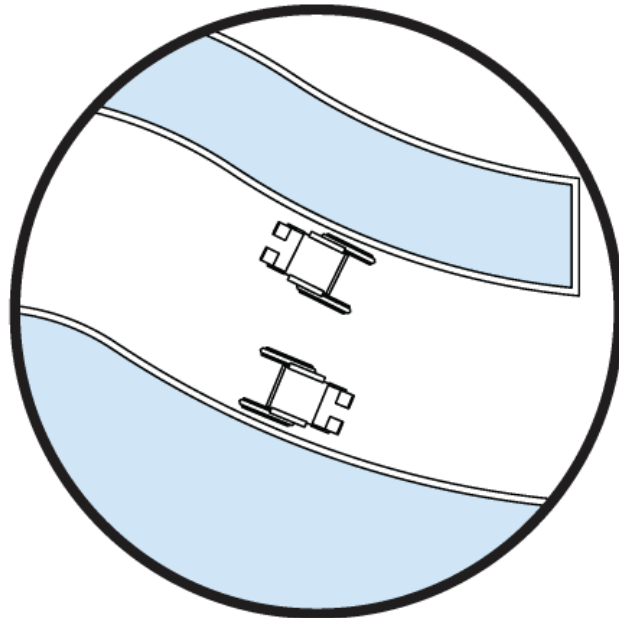
# Roof Design



Fire Pit Seating



Grill and Seating Area



Raised Garden

Figure 199

**Roof**

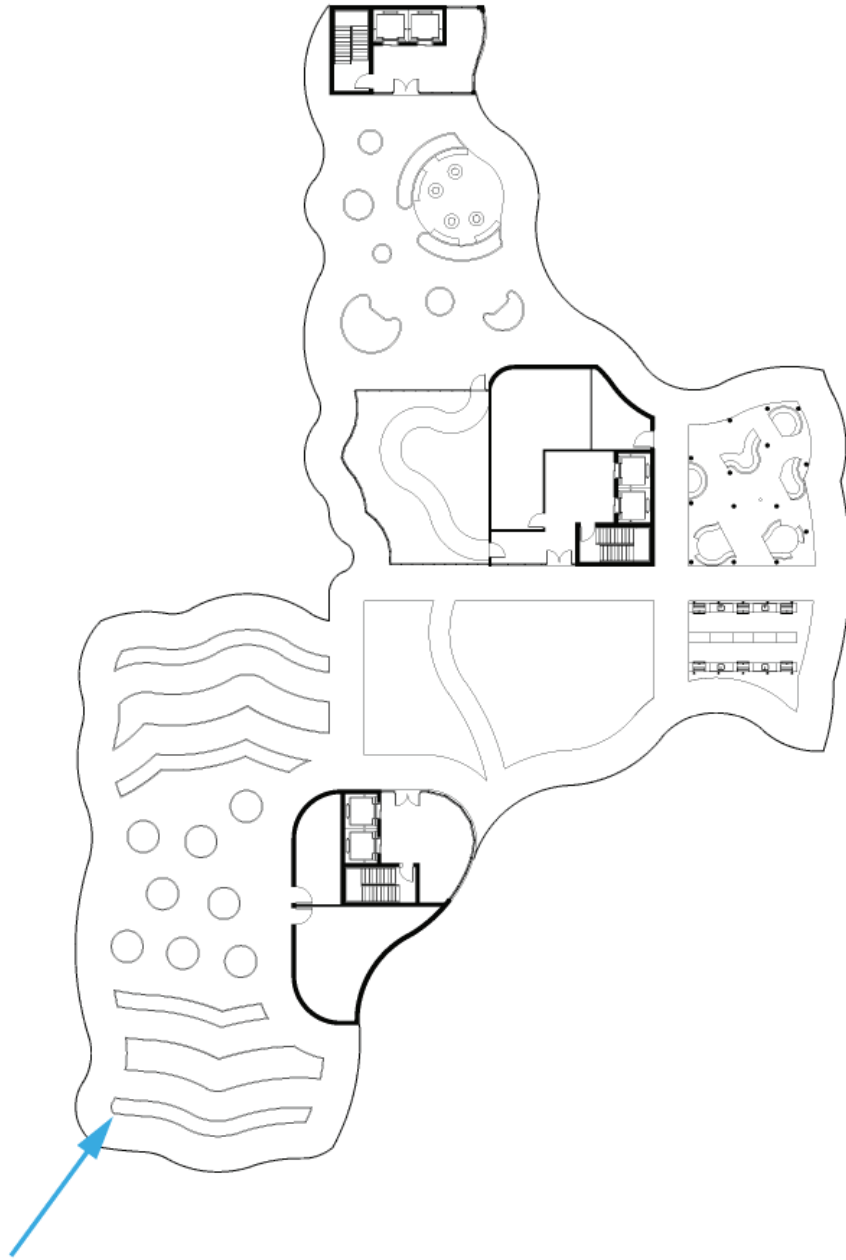




Figure 201

# Roof

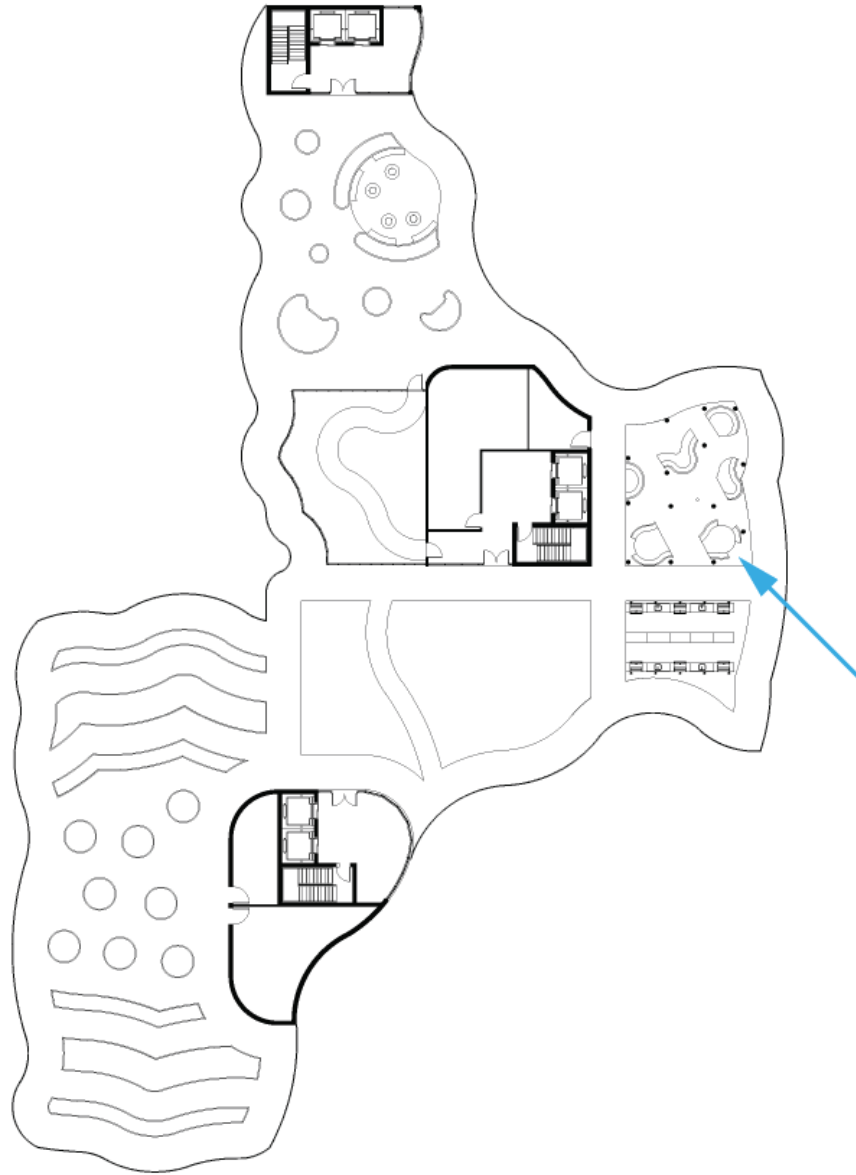






Figure 203

# Roof

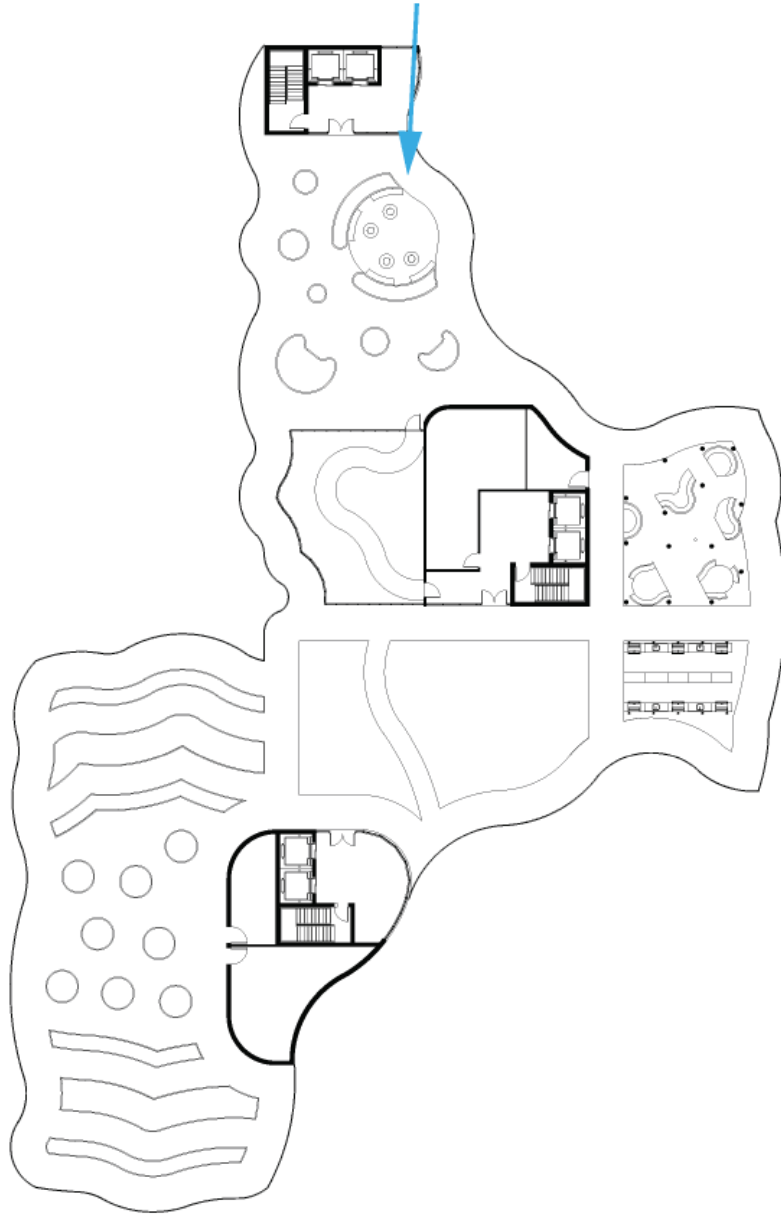




Figure 205

# Roof

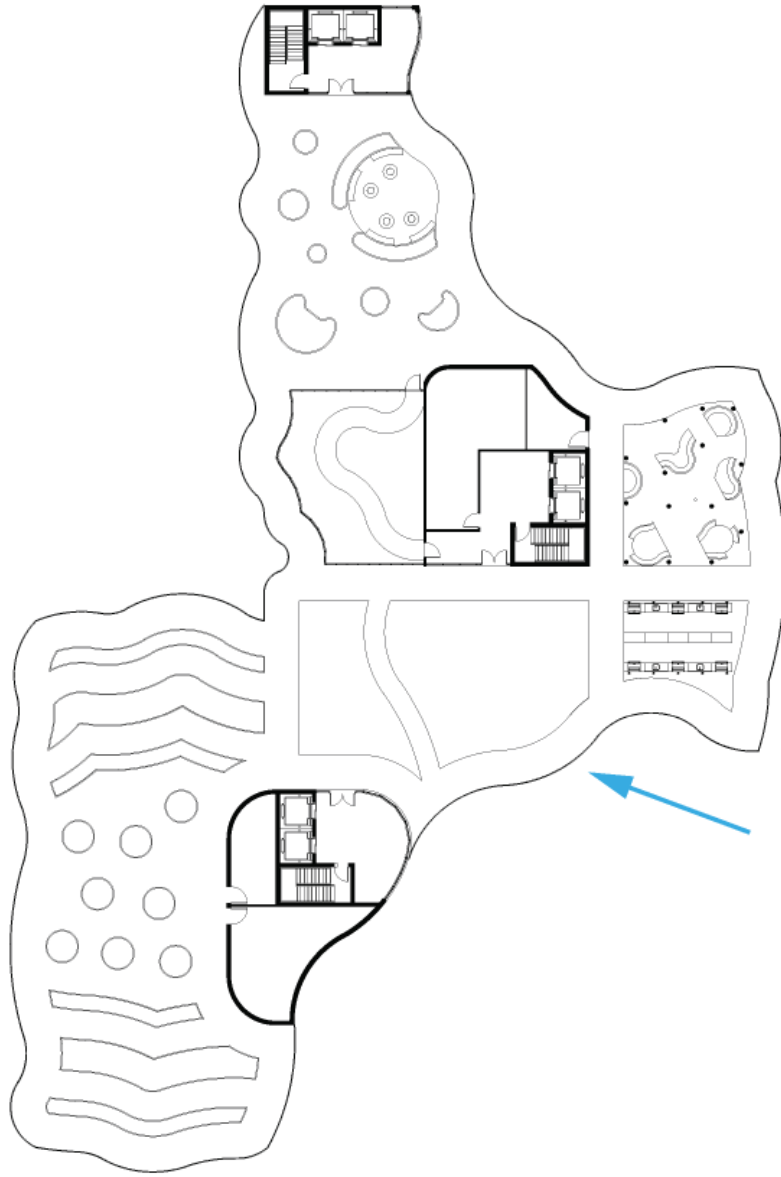


Figure 206



Figure 207

# Roof

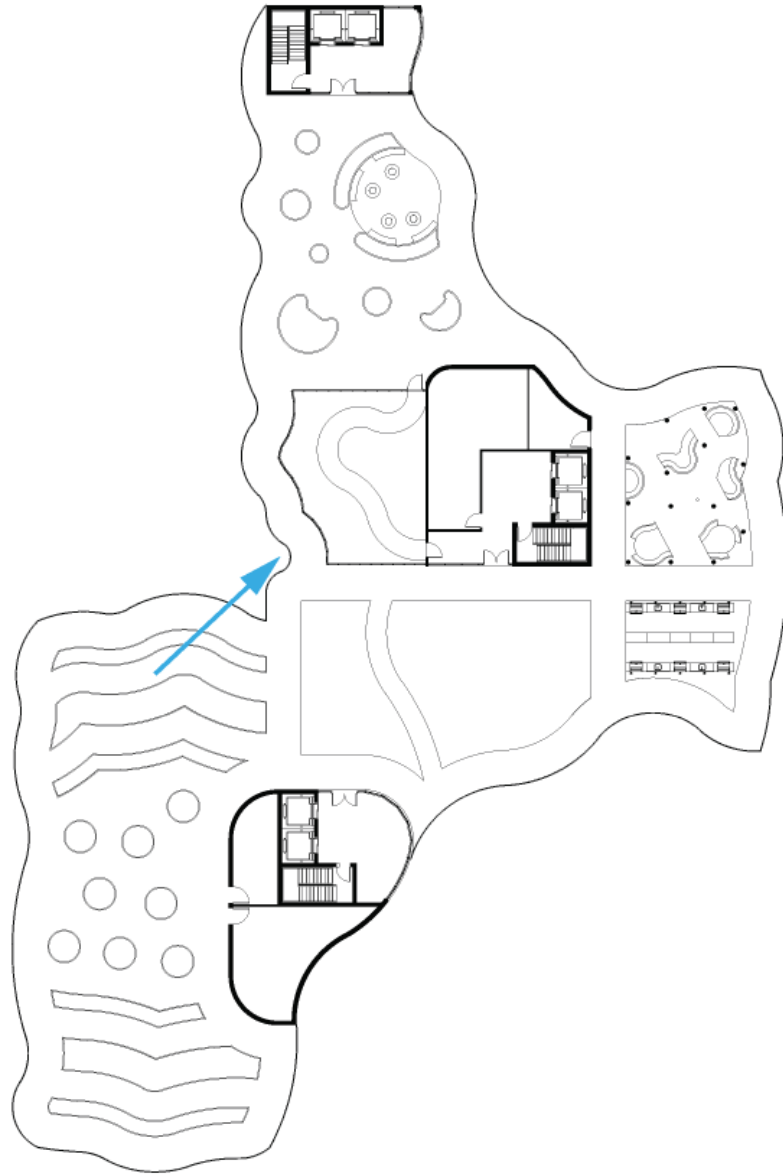


Figure 208



Figure 209

# Roof

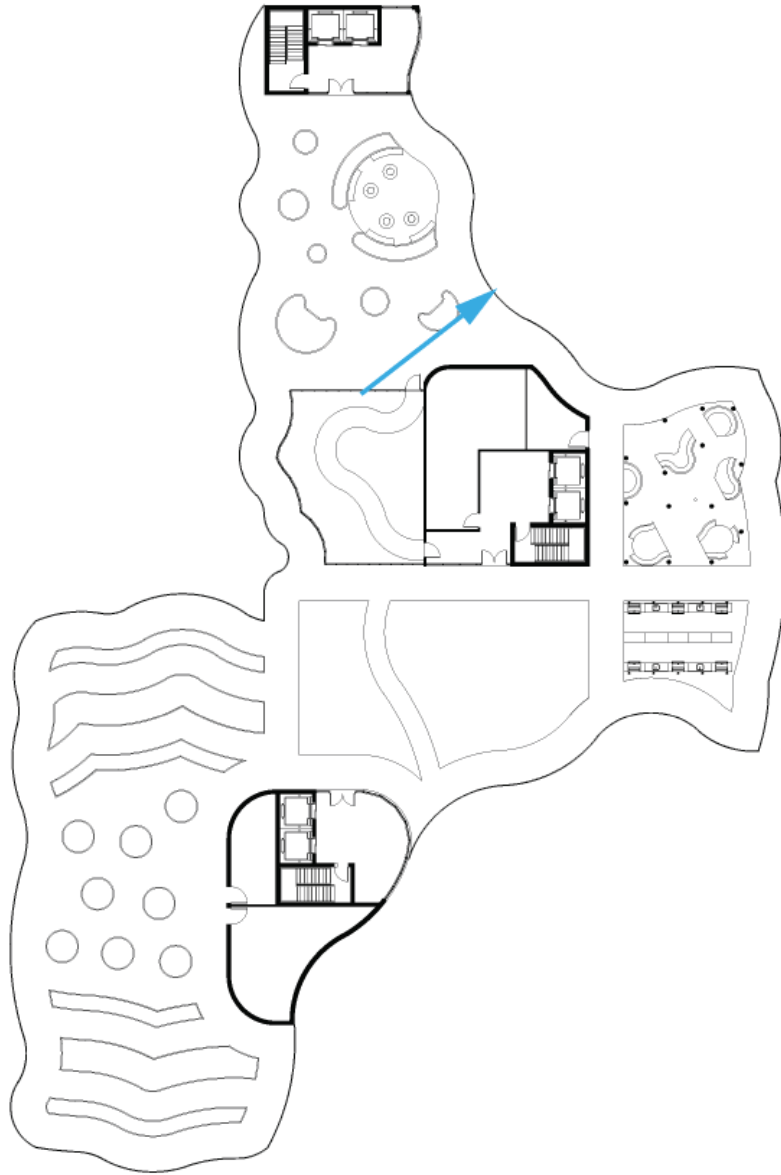
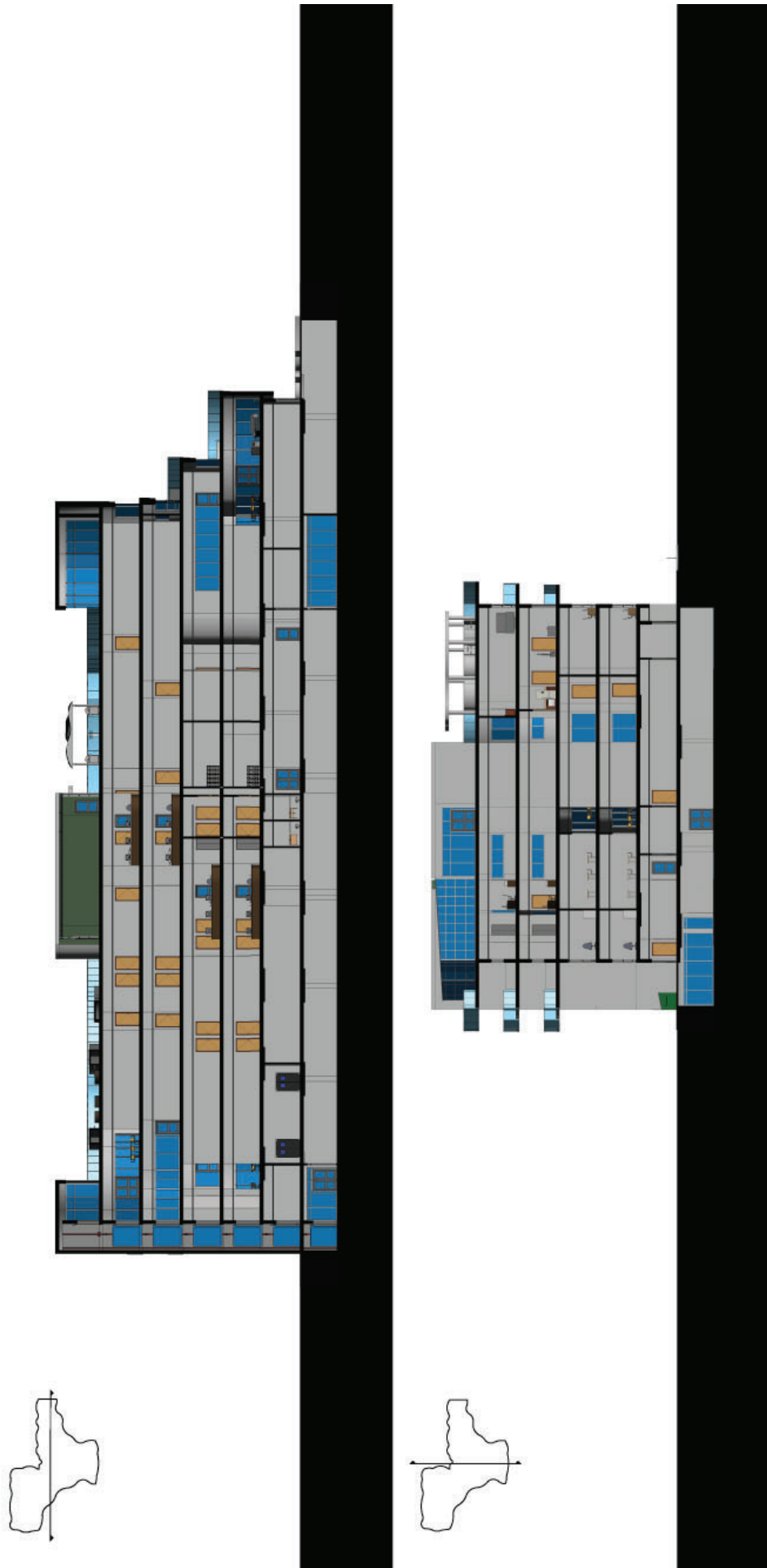






Figure 211

# Sections



Digital  
Presentation

Figure 212

## About My Disability

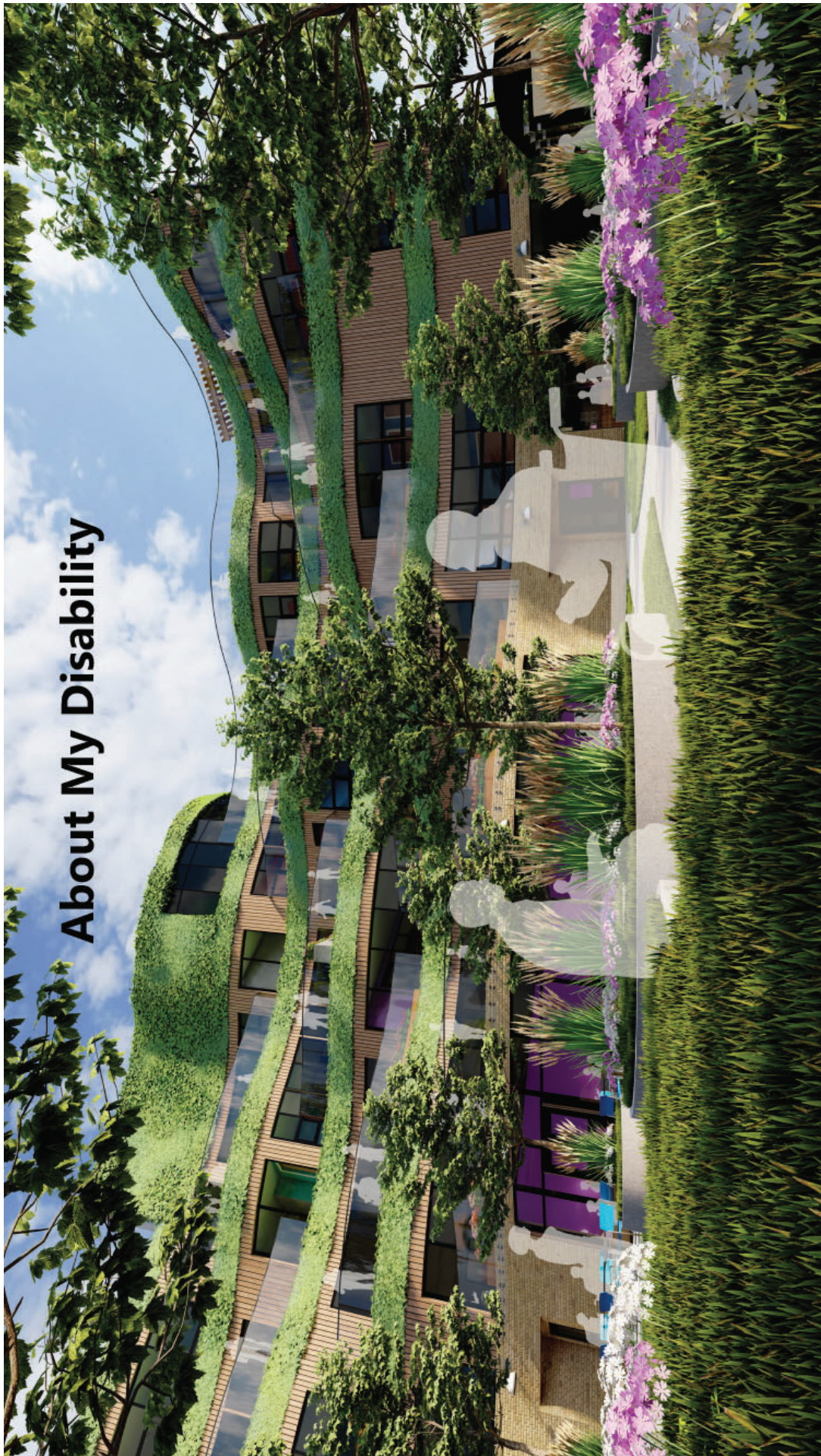
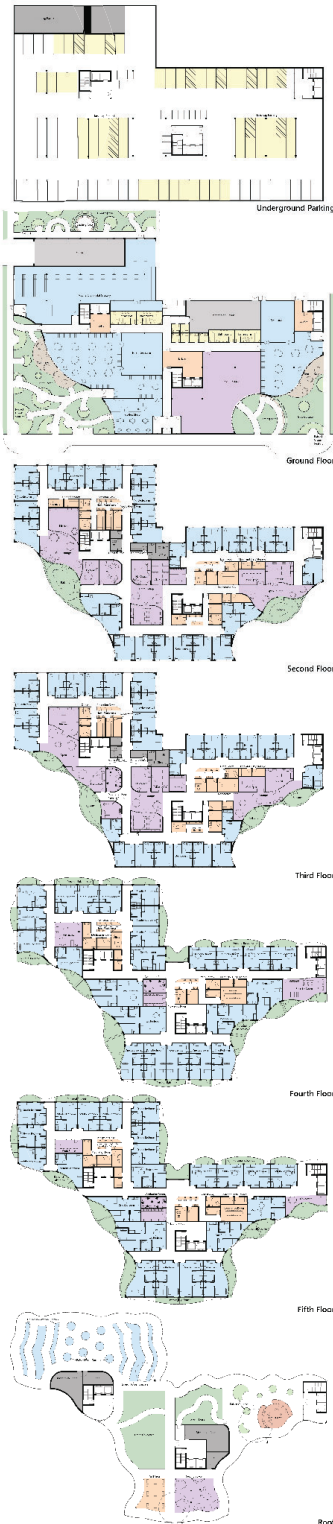
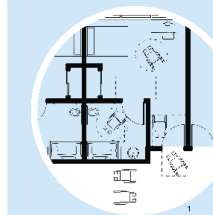


Figure 213

# Project Boards

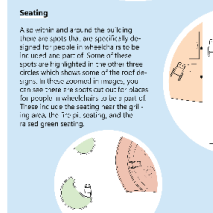


Designed by Jonathan Sidmore Thesis Professor: Jennifer Brandt

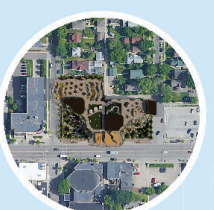


### Going Above ADA

When it comes to designing for people with disabilities, just meeting the minimum of ADA is the first step. The building has a minimum barrier-free route to a lift or elevator. When it comes to the area use to the bathroom, the width of 8' x 5' works, a 5% slope that 1/2" in 12" and the width of 7' 6" which is 30% more. These percentages may not seem like a lot, but for someone who needs the space to move around, it can mean everything. This also plays a role with the width of the hallway and 7' 6" which is less needed in a corridor and a space someone can use to work with.



**Site**  
 The site is located in Manchester, Minnesota on the corner of 15th and 14th Ave. South. I chose this location for a number of reasons. The first reason being that it is located in Hennepin County. While doing research I discovered that this county has a higher population of people with disabilities in Minneapolis. The area near the site has a 33% of the population has some type of disability. Another reason why I chose this site is because it currently has a parking lot located on it and a parking lot is needed for a residential building. I thought some of the reasons for the site were the project including the location and size of the site, the location of the site, and parking. The location of the building also will affect the site. Part of the building is on the edge of the site and the rest of the corner of the building is located back so it doesn't cover over the site. This site is a good location on the north side of the building to have a ramp for the building and existing area which was already located here on the existing site.



Project Boards

Figure 214

# Appendix

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# Previous Studio Experience

## 2nd Year

2017 Fall:      **Instructor:** Cindy Urness  
**Project:** Tea House      **Location:** Fargo, North Dakota  
**Project:** Boat House      **Location:** Minneapolis, Minnesota

2018 Spring:    **Instructor:** Charlott Greub  
**Project:** Marfa House      **Location:** Marfa, Texas  
**Project:** Bird House      **Location:** Back Yard  
**Project:** Multifamily      **Location:** Moorhead, Minnesota

## 3rd Year

2018 Fall:      **Instructor:** Regin Schwaen  
**Project:** Visitor Center      **Location:** Cooperstown, North Dakota  
**Project:** Viewing Deck      **Location:** Geirangerfjord, Norway

2019 Spring:    **Instructor:** Ronald Ramsay  
**Project:** Archive      **Location:** Chicago, Illinois  
**Project:** Native American Art Museum      **Location:** Moorhead, Minnesota

## **4th Year**

2019 Fall: **Instructor:** Mark Barnhouse  
**Project:** High Rise      **Location:** Miami, Florida

2020 Spring: **Instructor:** Paul Gleye  
**Project:** Urban Renewal      **Location:** Brussels, Belgium

## **5th Year**

2020 Fall: **Instructor:** Ronald Ramsay  
**Project:** Agincourt Project      **Location:** Agincourt, Iowa

2021 Spring: **Instructor:** Jennifer Brandel  
**Project:** Independence For Young Adults With Disabilities  
**Location:** Minneapolis, Minnesota

# Personal Identification



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Hometown: St. Cloud, Minnesota

