

A NEW PHASE OF AGING

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A NEW PHASE OF AGING

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By
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THESIS ABSTRACT

A B S T R A C T

Aging brings about a transition that highlights the importance of creating a connection between our aging population and the community. By seeking a stronger relationship among the groups, quality of life becomes the driving force to enhance the current senior living program. A mixed-use skilled living facility will allow the Seniors the independent living while incorporating society to use the shared areas. Shared areas will complement the existing retail stores while adding health services and extending current amenities. Prior to this project, the Fargo- Moorhead community was familiar with the Moorhead Center Mall. This structure is failing to contribute to the retail sector of the city. With the majority of the retail spaces empty, the Moorhead Center Mall presents an opportunity to create a safe, independent space for Seniors to live and interact with society and in return benefit the community with a new and inviting space. The challenge of aging will be addressed through this thesis project displaying the direct needs and reconnection with society in order to better the quality of life for the aging population.

NARRATIVE OF THE THEORETICAL ASPECTS OF THE THESIS

Making the Transition

Since the 'baby boomer' population has hit retirement age, on average about 10,000 people retire per day and about 1 in 5 Minnesotan residents of the baby boomers are retiring. This presents an opportunity to create a mixed use facility within an existing mall to benefit the elderly and the community among them. The abruptness of one's lifestyle for healthcare related issues during their elderly journey can leave a lasting effect on life expectancy.

The large number of retirements among the United States, presents a large market for those needing additional housing. The mindset about retirement facilities or 'nursing homes' have proved to be places to die. Studies have shown the mindset among the aging population who make the transition see the negative impacts from these types of facilities. Residents are becoming less mobile, more dependent and quickly becoming isolated from society. The community outside of an elderly facility is one of the great needs for Seniors. By keeping the aging population engaged in society, their health both emotionally and mentally is found to be much stronger when continually engaging in the community around them. To reach this need within a facility, a retail sector open to the community as well as the elderly, allows for continued connection to the Fargo- Moorhead community. This strategy will promote the community to use the updated retail sector as well as connect to those living the building.

NARRATIVE OF THE THEORETICAL ASPECTS OF THE THESIS

Reaching the lifestyle needs of everyone will be found through personal interviews and documentation of daily habits and activities of elderly people. This technique will organize the patterns of activities and the time patterns of each. Connection among the community will allow for interviews describing amenities the FM area would like to see in the existing mall. The interviews will reach the most important needs to create a successful program.

The bond I created with my Grandparents will never be replaceable. Growing up, I spent most days at grandma and grandpa's house, following grandpa around with the lawn mower or baking in the kitchen with grandma. These are some of my favorite memories from all the times we got to spend together. Within the past couple years, their health has quickly declined and the home they cherished for the past 50 years was no longer an option moving forward. I was devastated by the decision to move my grandparents to Burnsville, Minnesota. This project will provide a sense of welcoming for families to continue to enjoy their favorite activities together and know their loved ones are getting the best quality of life possible.

PROJECT TYPOLOGY

T Y P O L O G Y

The Senior living community encompasses a mixed use building with a skilled living facility. Mixed use will include residential living, health care, retail, fitness, and community gathering space. The residents will have the opportunity to engage in society by sharing amenities with the public. The amenities will benefit both the residents and the community around them. Moorhead, MN lacks some essential amenities which the community depends on the twin city, Fargo, ND for. The architecture of the mall will help define the community engagement and growth as a whole moving forward together.

TYPOTOLOGICAL RESEARCH

1 MAYERHOF COMPLEX

2 ELTHETO COMPLEX

3 GRIFFIN PLAZA

4 BON SECOURS

1 MAYERHOF COMPLEX



FIGURES 1-3

MAYERHOF

F A C T S



FIGURE 4

ARCHITECT | AREAL ARCHITECTEN
TYPOLOGY | SOCIAL SENIOR CARE FACILITY
PROJECT YEAR | 2014
LOCATION | MORTSEL, BELGIUM
SQUARE FOOTAGE | 15,217 sqm.

P R O G R A M

- Assisted Living Apartments
- Residential Care Center
- Short Stay Center
- Underground Parking
- Large Garden
- Chapel
- Music Room
- Terraces
- Hair Dresser

E N V I R O N M E N T A L

This care facility is constructed to provide green space for the residents. The building protects residents using a terrace with optimal orientation on the site to protect from the wind but provide abundant sunshine. The use of terrace yields benefits to the building similar to green roofs.

C U L T U R A L

A building like this is looking to house the elderly community for many decades to come. The brick facade will protect the building and provide an environmental barrier along with the terraces provided for the residents.

S O C I A L

The building encourages residents to socialize and interact with one another in various different ways. All of the benefits that come from socializing with others as one ages continues to be the driving factor for the importance of elderly communities.

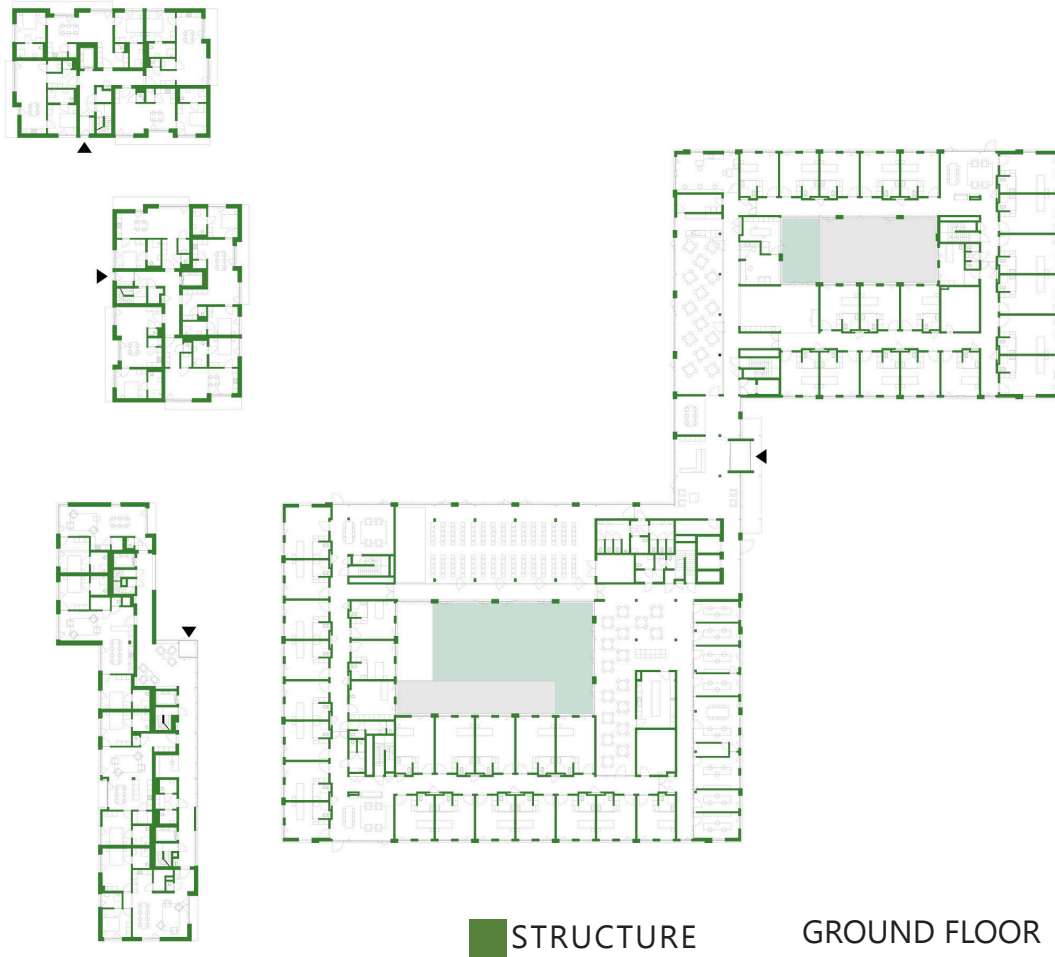
N A T U R A L L I G H T

The orientation of the building was done very specifically to let maximum light into the building. All rooms and hallways within the community have large windows. Complementary light woods and neutral whites for interior finishes help enhance the natural lighting throughout the building.

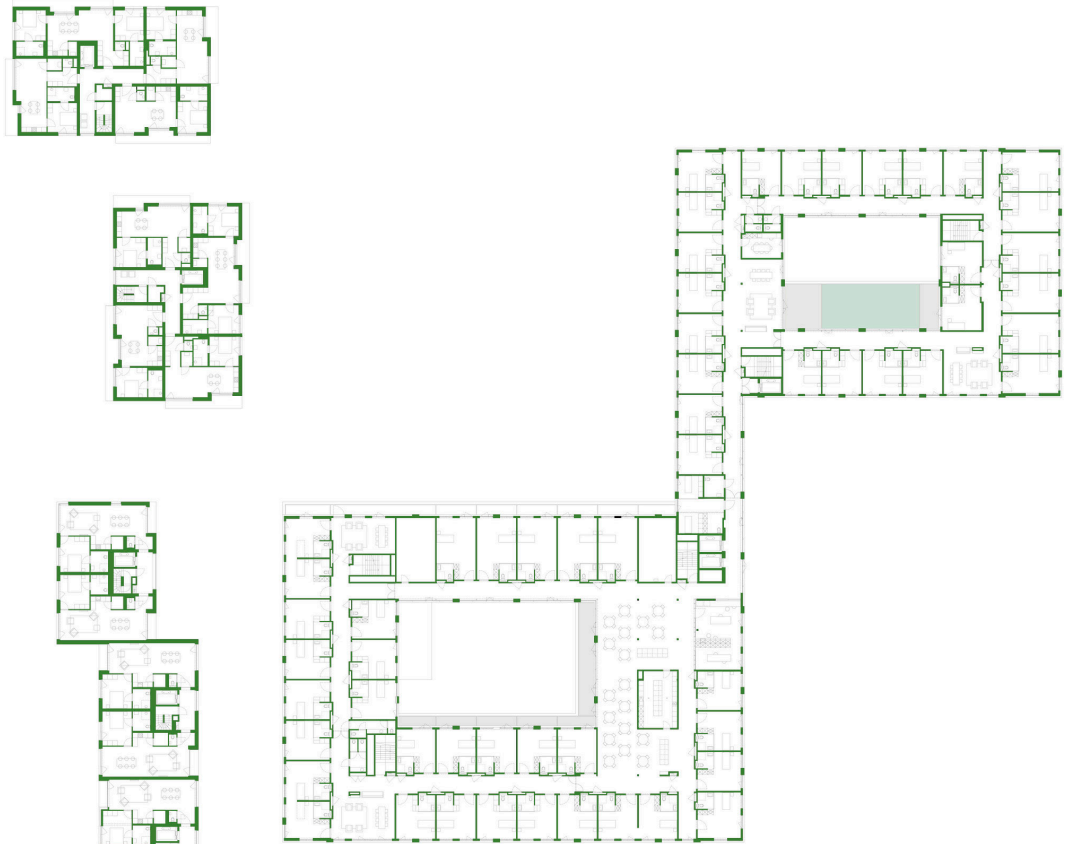
MAYERHOF

STRUCTURE

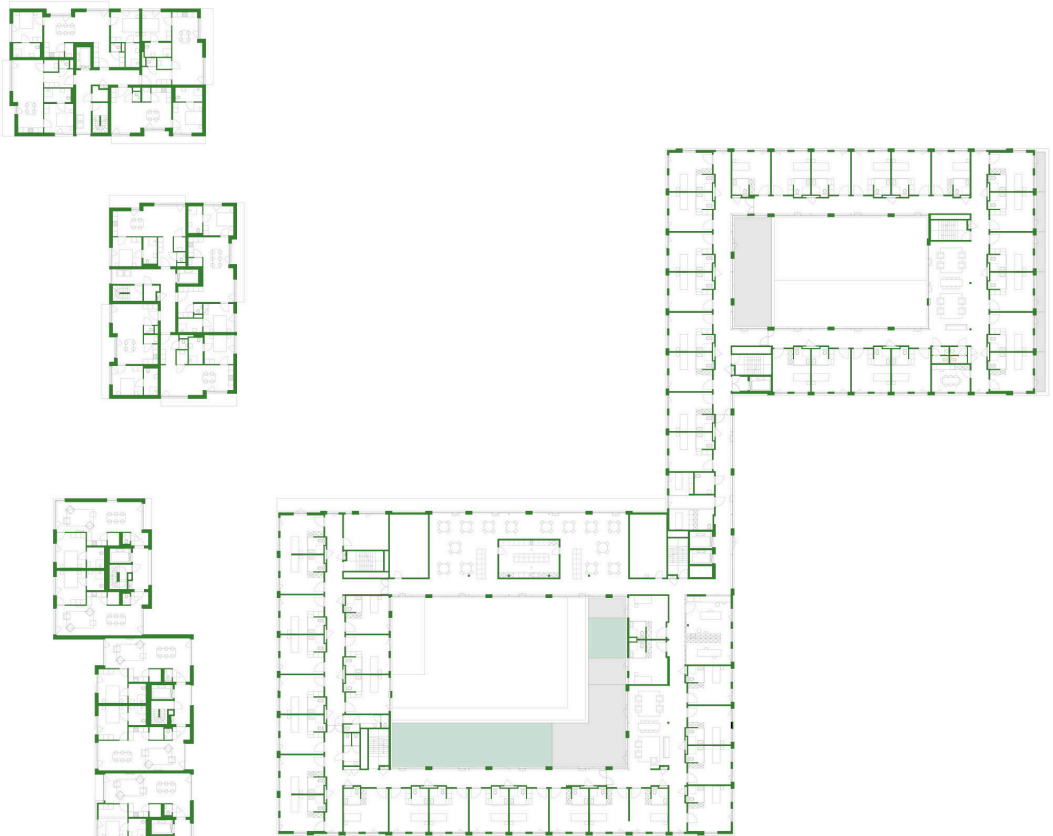
The structure of this care facility was greatly influenced by the circulation and needs in the building. The squared edges provide ease for the layout of residential rooms and understanding the layout of the building. Assisted living apartments are detached from the building but also shaped with squared edges.



MAYERHOF



FIRST FLOOR



■ STRUCTURE SECOND FLOOR

FIGURES 5-7 ¹⁶

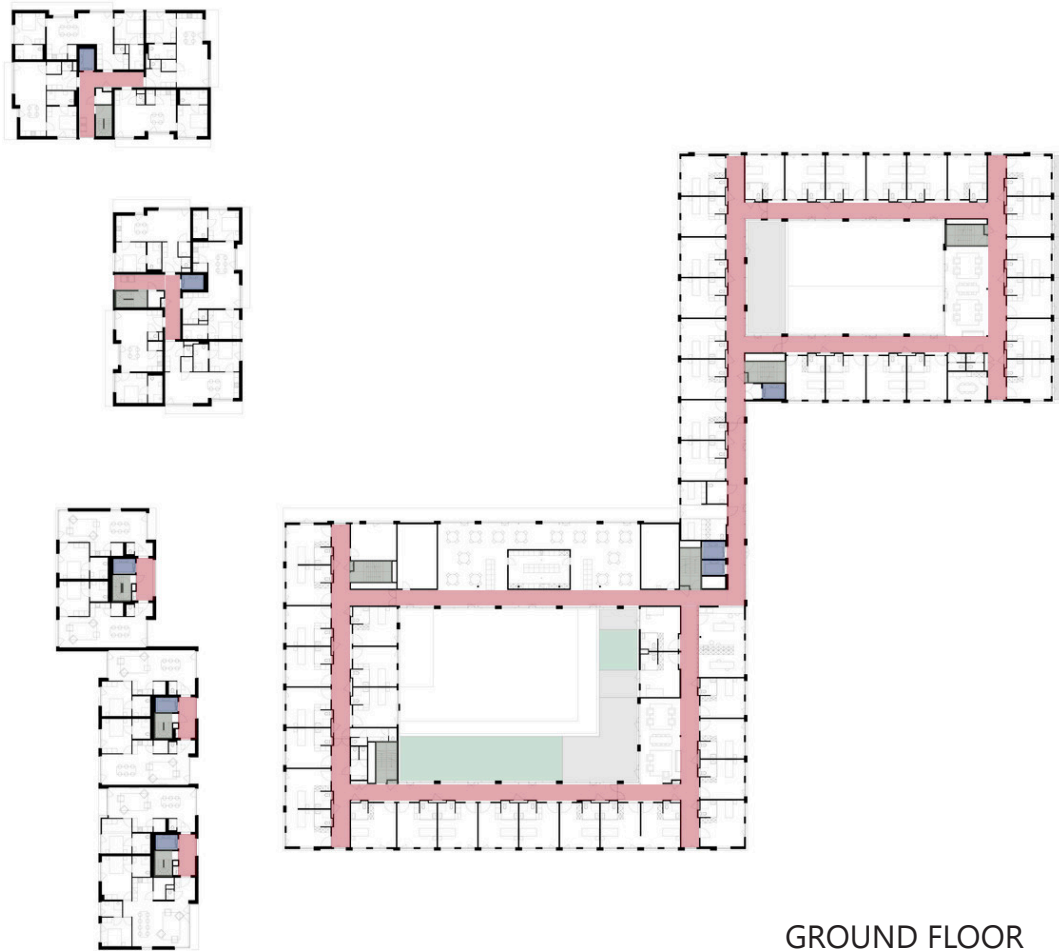
MAYERHOF

REPETITIVE TO UNIQUE

Repetition can be found in this unique asymmetric plan. The building has repeating squared angles throughout. The detached buildings make up the shape of rectangles which are followed throughout the entire site.

CIRCULATION

The structure of this care facility was greatly influenced by the circulation and needs in the building. The squared edges provide ease for the layout of residential rooms and understanding the layout of the building. Assisted living apartments are detached from the building but also shaped with squared edges that allow for easy circulation.



■ STAIRS ■ ELEVATOR ■ CIRCULATION

MAYERHOF



FIRST FLOOR

SECOND FLOOR

STAIRS ELEVATOR CIRCULATION

FIGURES 8-10

MAYERHOF

M A S S I N G

The form of the building was inspired by a figure eight. This type of shape allows for infinite circulation. The goal was to easily and better connect each floor and the variation of rooms in the building. The diagram below displays the variety of massing per floor.

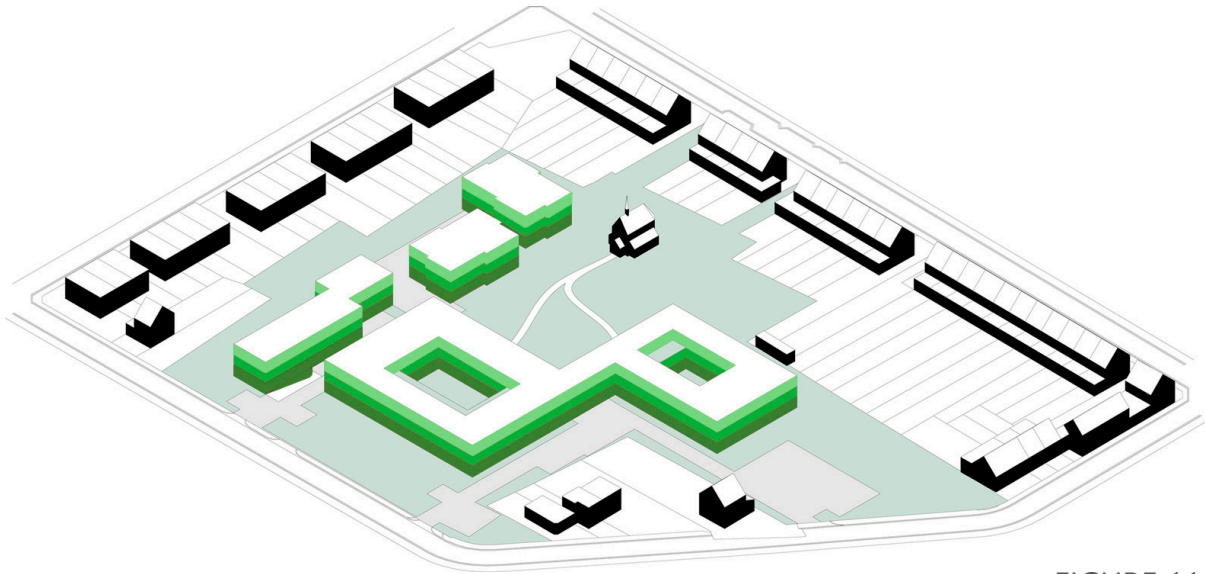


FIGURE 11

S P A T I A L R E L A T I O N S H I P S

The important relationship between circulation and social interaction space is shown in the diagram below. This project focuses on the figure eight layout that emphasizes social interaction and connection to others in the building. There are lots of interaction spots throughout the building to benefit the residents.

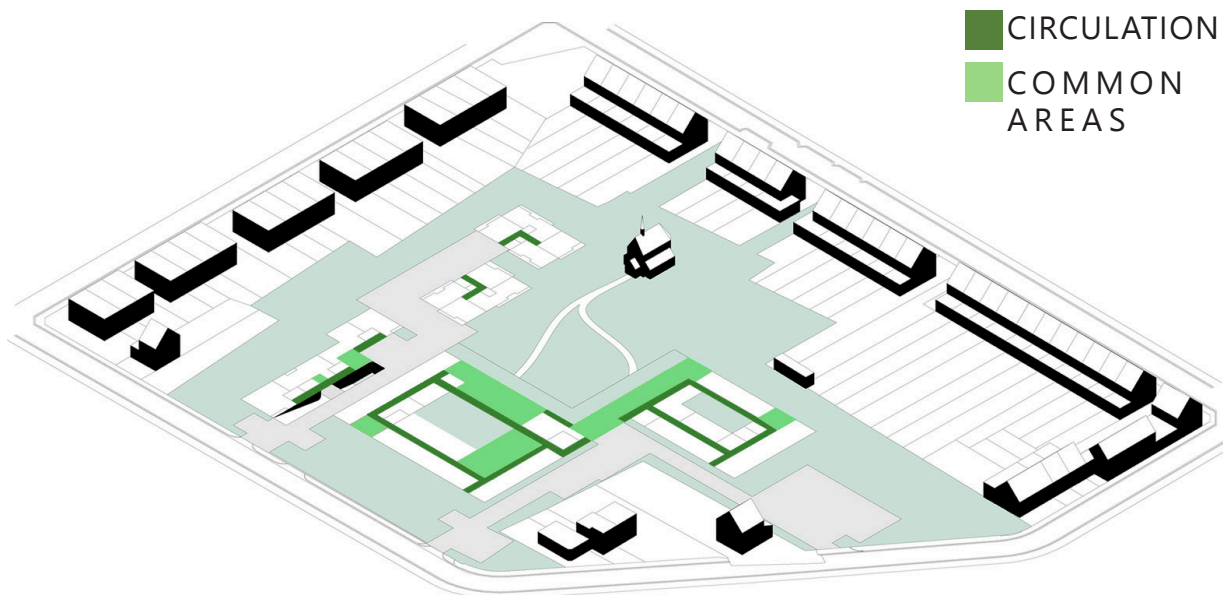


FIGURE 12

MAYERHOF

A D D I T I V E T O S U B T R A C T I V E

In the section, the subtractive element of the building can be seen where the terraces of the building are located. The corridors of the building are wrapped around two voids centered on each of the rectangles that display another subtractive element of this building.

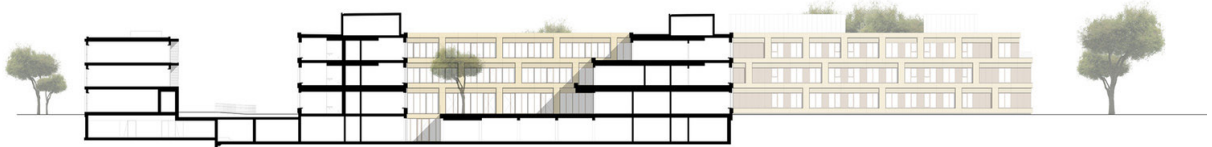


FIGURE 13

C O N C L U S I O N

This facility acts as a small town to assist the elderly community. The circulation of the building is ideal for connecting all levels and spaces together throughout the building. The sense of overview of the space allows seniors to feel secure in their home. This is an effective technique when working with the aging community. By involving both assisted living and apartments into the facility, the elderly are able to call this facility home for a longer period of time.

This senior living facility is an effective way to use spatial relationships while considering the aging community. The relationship and emotions work together through design and it is important to keep this in mind.

2 ELTHETO COMPLEX



FIGURE 14-16

ELTHETO

F A C T S



FIGURE 17

ARCHITECT | 2BY4-ARCHITECTS
TYPOLOGY | HOUSING AND HEALTH CARE
PROJECT YEAR | 2015
LOCATION | RIJSSEN, THE NETHERLANDS
SQUARE FOOTAGE | 20,000 sqm.

P R O G R A M

- Independent Living
- Alzheimer's Care
- Disability Care
- Health Care Facility
- Outdoor Space
- Grocery Store
- Hair Salon
- Day Care
- Library

E N V I R O N M E N T A L

Natural healing environment is provided to the community at Eltheto. This allows for abundant green space with numerous trees and plants. Various plants provide shade, flowers and even fruit for the residents to enjoy.

C U L T U R A L

Residents are encouraged to make one of the four blocks home. The culture here presents a welcoming feel with each block suited with public and outdoor space and views of the healthcare center at the heart of the complex.

S O C I A L

The quality of life for the residents is the main goal of this complex. Residents can 'live at home' for the maximum years providing easy access to social and health aspects of their life. The neighborhood atmosphere makes the care facility feel more like home.

N A T U R A L L I G H T

Designed to allow abundant natural light in the building for the residents. Large windows on all facades to maximize the amount of natural light in each building which elderly can greatly benefit from.

ELTHETO

STRUCTURE

A project like this would have a relatively simple structure. None of the buildings are extremely large or have numerous floors which make for a simpler structure system.



FIGURE 18-19

CIRCULATION

Below is a diagram showing circulation patterns around the site. The elderly are encouraged to use the great amount of public space around the neighborhood along with the vast green space and community gardens. The community space located in the middle also helps encourage the residents to use the public space and enjoy the outdoors.



FIGURE 20

■ COMMUNITY SPACE ■ RESIDENTIAL SPACE

ELTHETO

S P A T I A L R E L A T I O N S H I P S

Spatial relationships are shown in the figure below. In the past, senior living facilities focus on the health care aspects of living instead of the quality of life. The importance of quality of life and the life expectancy of one run hand in hand. The relationship with the variety of locations for the living programs are designed around the idea of interacting with the social context.

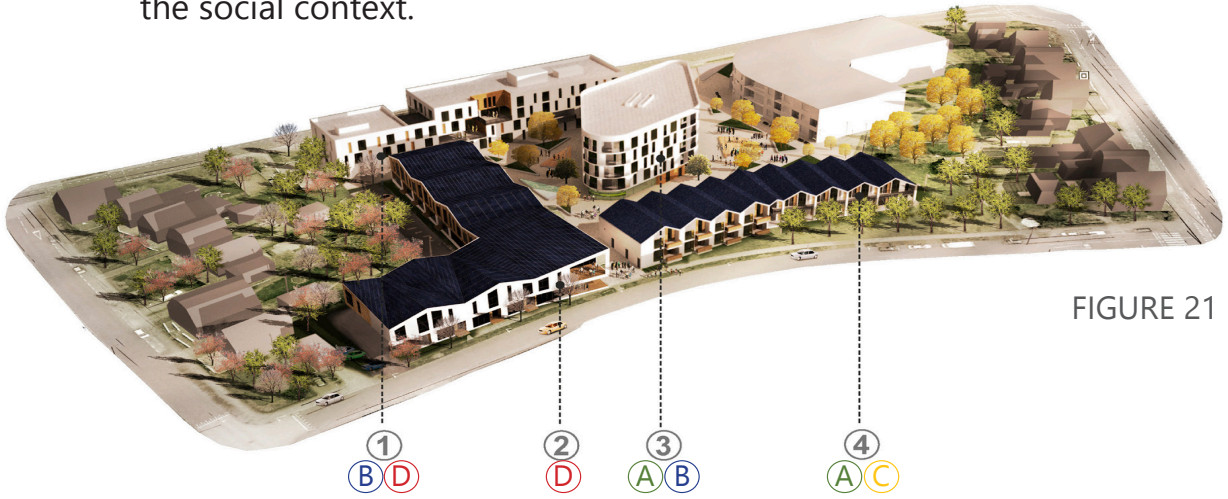


FIGURE 21

- ① SOMATIC SMALL GROUP LIVING
- ② DISABILITY SMALL GROUP LIVING
- ③ APARTMENTS WITH ACCESS TO CARE
- ④ APARTMENTS WITH ACCESS TO CARE

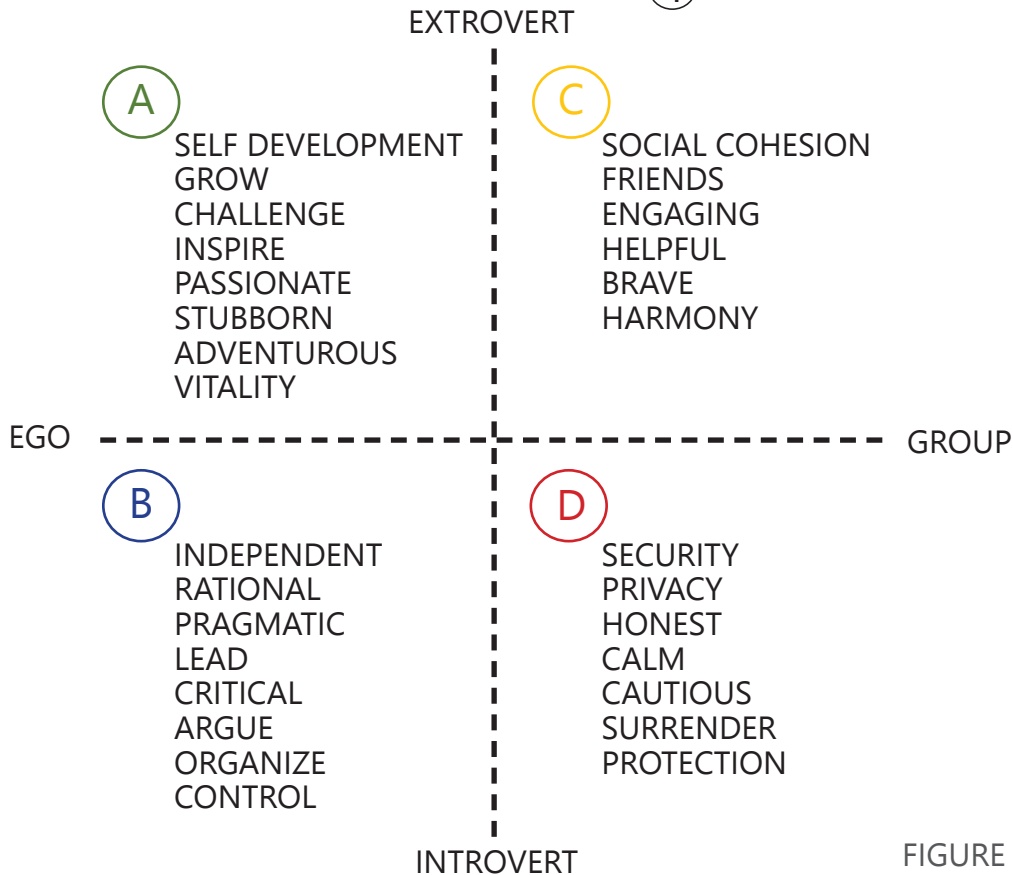


FIGURE 22

ELTHETO

UNIT TO WHOLE

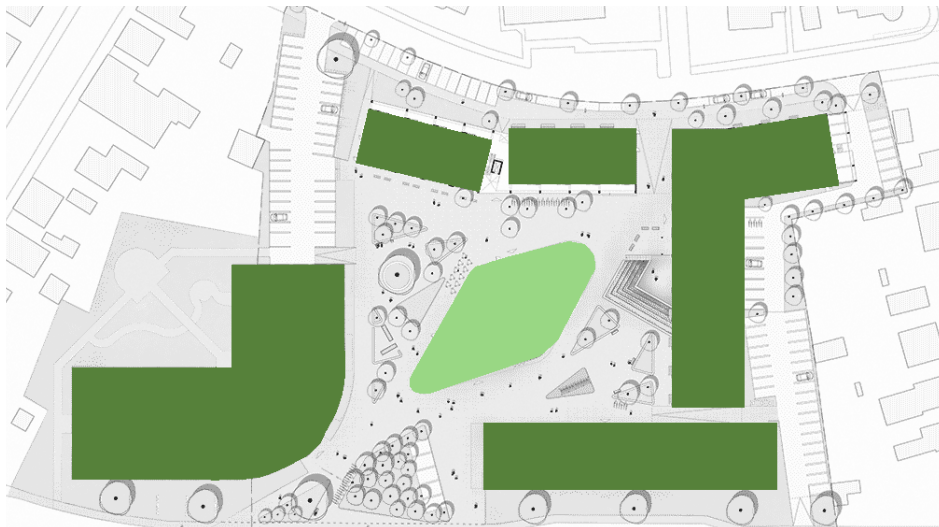
This complex is broken into four blocks with the healthcare center at the heart of the complex. The four blocks are their own units but connected as a whole with public and outdoor space for the community and considered a neighborhood all together.



FIGURE 23

MASSING

Massing occurred through activities. Residential areas are all massed along the edges providing a barrier to the community. The center mass is the most beneficial space for the residents holding the community activities and health care facility.



FIGURES 24-25

GARDENING PEACE SOCIALIZING TOGETHER ACTIVE



ELTHETO

C O N C L U S I O N

The focus for this building is creating a space that allows for the best quality of life for the seniors. Quality of life is the most lost when seniors began their journey into a senior living facility. Isolation is challenged in this facility because of the neighborhood atmosphere that is presented through the spatial relationship of buildings and the healthcare at the center. The entire neighborhood is linked by public space that allows the seniors to stay part of the social context. The natural colors and materials help carry the outdoors to the inside to add a calming touch. The amenities at the center with healthcare creates easy circulation around the site. The consideration for a variety of amenities for the community makes the transition easier for those aging.

This senior living facility was very successful in the design and keeping the focus on the quality of life. The natural healing environment and the neighborhood feel is a technique that should be incorporated in more senior living facilities.

3 GRIFFIN PLAZA



FIGURES 25-27

GRIFFIN

F A C T S



FIGURE 28

ARCHITECT | KTG ARCHITECTURE
TYPOLOGY | ASSISTED LIVING & RETAIL
PROJECT YEAR | 2019
LOCATION | SIMI VALLEY, CALIFORNIA
SQUARE FOOTAGE | 97,000 sqft.

P R O G R A M

- Assisted Living
- Memory Care
- On-site Parking
- Retail
- Rooftop Terrace
- Fitness Center
- Beauty Salon
- Pharmacy
- Library

E N V I R O N M E N T A L

Resort style is found at this plaza to enhance the experience of both residents and the community. The indoor and outdoor space is provided for various activities. Green roofs, terraces and community gardens help provide extra green space for all to benefit from.

C U L T U R A L

Senior living facilities among retail spaces are challenging the current ways seniors are living now. The mix of uses encourages residents to continue to be active and engage within the local community in this innovative style of senior living.

S O C I A L

This project inserts a senior living facility into a retail district at the Griffin Plaza. The retail district allows the seniors to continue to interact with the local community by sharing amenities and retail space.

N A T U R A L L I G H T

Designed to allow abundant natural light in the building for the residents. Large windows on all facades to maximize the amount of natural light in each building.

GRIFFIN

STRUCTURE

For this project, the structure would be a general wood structure to support the senior living elements. The retail area is renovated to enhance the interiors and exteriors which may not all need structural changes.

CIRCULATION

This large site provides a very walkable area for the seniors and the community using the space. As you can see in the diagram, the walking paths were enhanced between the stores and the senior community for all to use. Walk ability for seniors is key to a successful project.

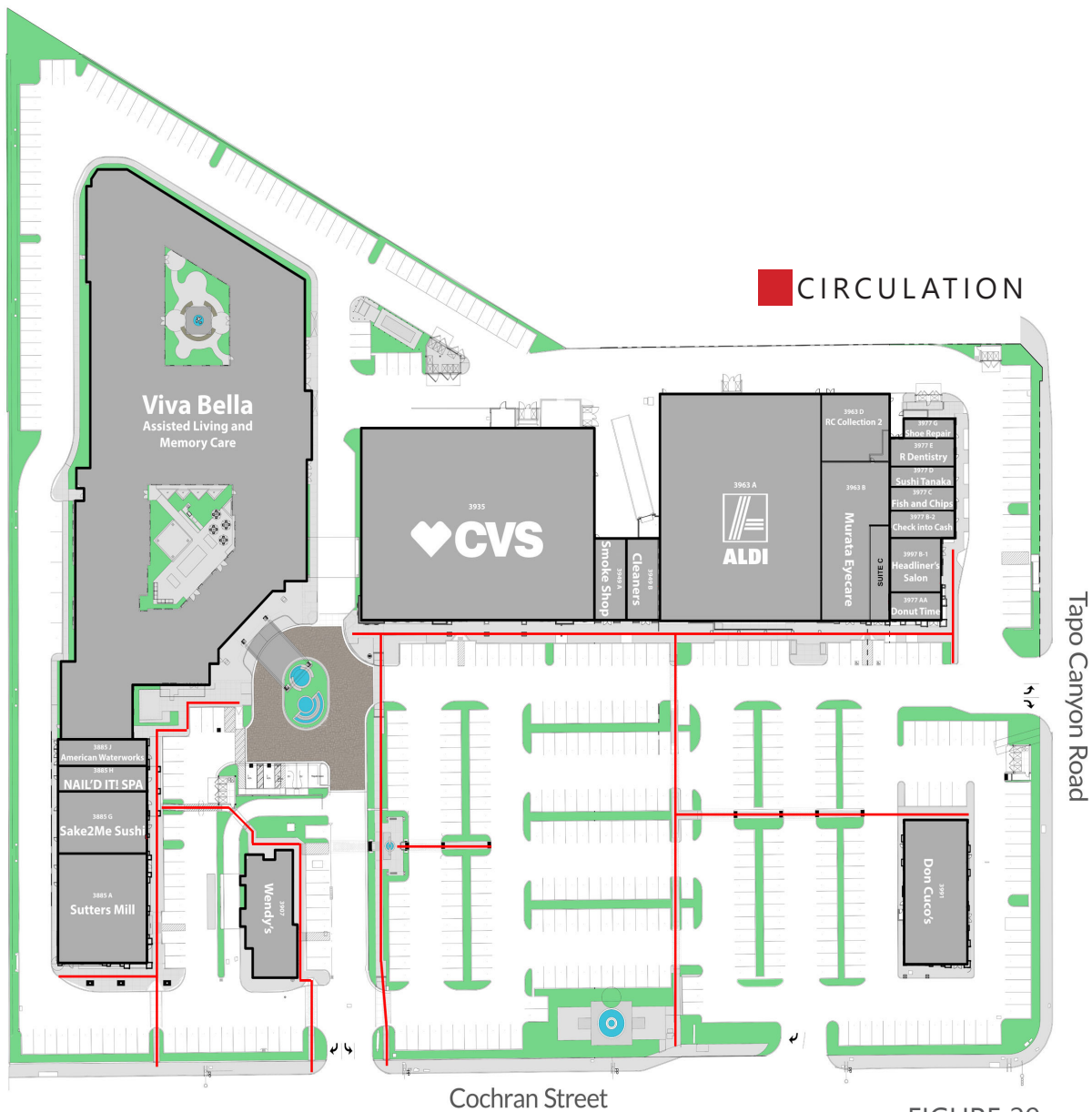


FIGURE 29

GRIFFIN

A D D I T I V E T O S U B T R A C T I V E

Subtractive is found in the senior living area where the courtyard is located. The void in the middle of the building allows for outdoor space for the residents to have private space to engage in outdoor activities such as gardening, relaxing or dining.

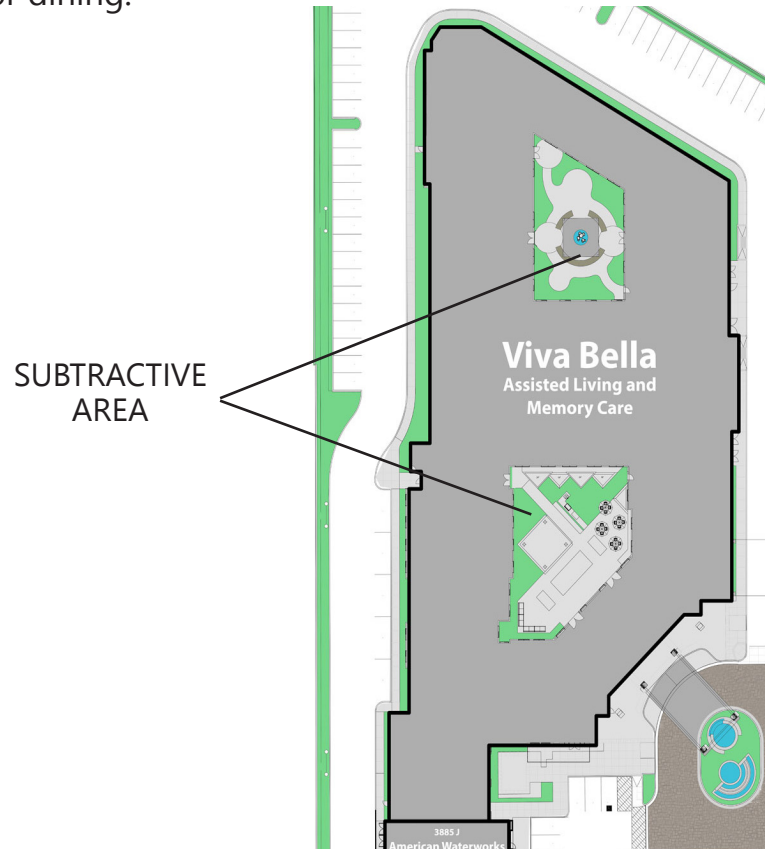


FIGURE 30

U N I T T O W H O L E

This applies to plaza because of the different uses that come together to make a whole. Each use in the complex is it's own unit. As a whole, each unit makes the Griffin Plaza.

M A S S I N G

With the reuse of a mall for the complex, it is very boxy like. Malls have a variety of stores normally shaped to a rectangle or square to benefit everyone. Some store fronts are located on the exterior of the building creating a 'box store' feel. The proportions between the residential and retail areas are relatively equal based on square footage.

GRIFFIN

S P A T I A L R E L A T I O N S H I P S

The diagram below shows the relationship between the residential and the retail space for this complex. The residential area is completely submerged into the retail for a critical reason. The main reason is to keep the relationship between the community and the residents active at all times. This will help keep the residents reacting with the local community.

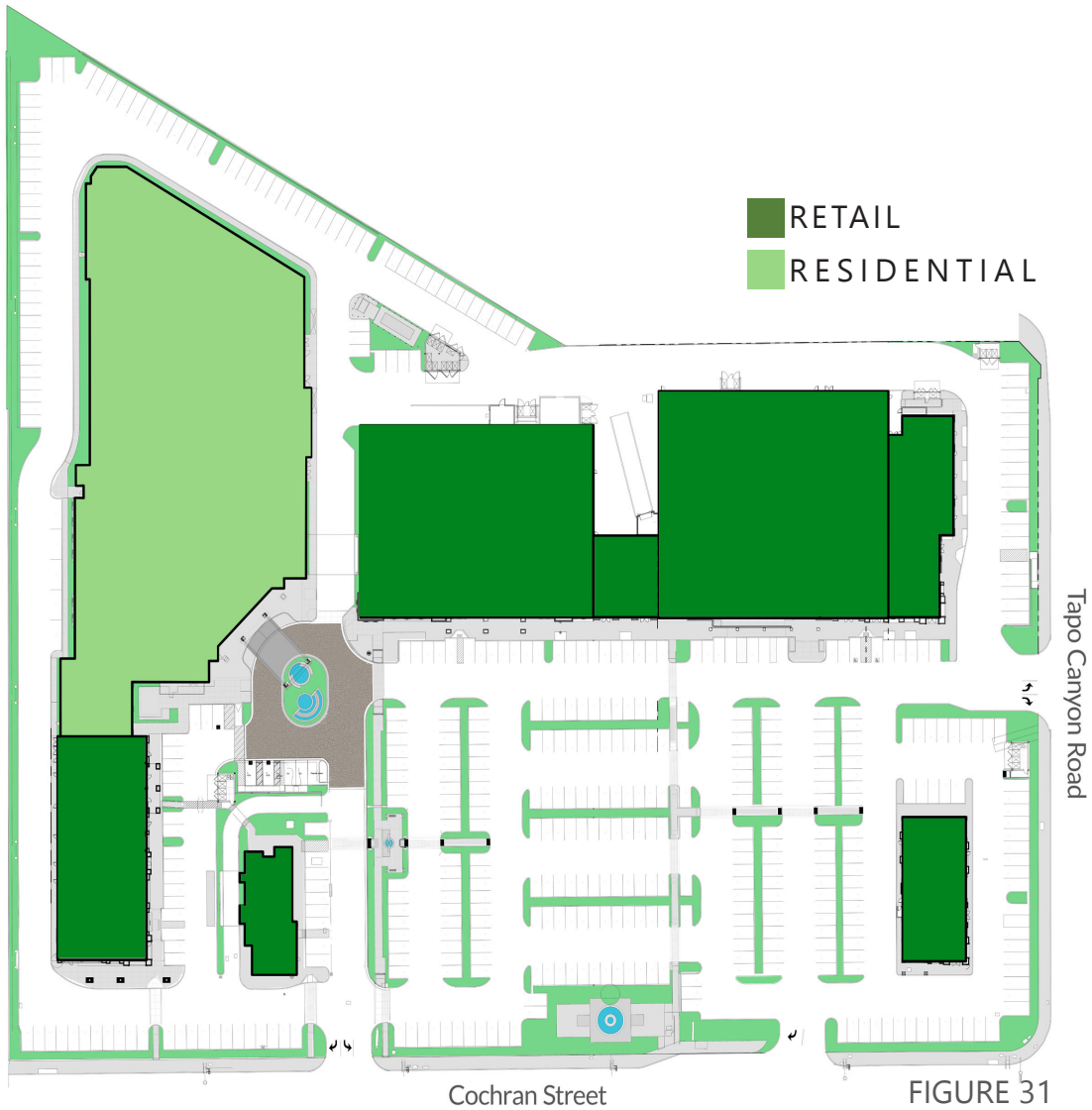


FIGURE 31

GRIFFIN

C O N C L U S I O N

Griffin Plaza is an exact study of implementing a Senior Living Facility into a dying shopping center. The unifying idea reaches why an existing structure better supports a Senior living community compared to building a new structure. During this project, the shopping center was converted into Senior living on a portion of the site. The rest of the shopping center has enhanced store fronts and remodeling done to create a better atmosphere. This building was successful in creating an environment to provide Seniors with direct interaction with society. Functionally, the building is able to provide both functions and reach the needs of both groups. Both the society and the seniors benefit from interaction like this compared to stand alone Senior living facilities.

This building showcases a model that needs to be integrated more into society. The Seniors living in this facility will receive a positive impact on their life from choosing to live at Griffin Plaza. The program from this site can be implemented into my project and have a beneficial impact on society.

4 B O N S E C O U R S



FIGURES 32-34

BON SECOURS

F A C T S



ARCHITECT | ATELIER ZUNDEL CRISTEA
TYPOLOGY | ELDERLY RESIDENTIAL
PROJECT YEAR | 2014
LOCATION | PARIS, FRANCE
SQUARE FOOTAGE | 29,000 msq.

FIGURE 35

P R O G R A M

- Assisted Living
- Community Rooms
- Courtyards
- Public space
- Community Gardens
- On-site Parking

E N V I R O N M E N T A L

Indoor, outdoor spaces are found all over this senior living facility. Keeping the environmental aspect in a project for senior living leaves a positive effect on the residents living in the building. It is important to have space that feels natural in an urban environment.

C U L T U R A L

Senior living facilities among retail spaces are challenging the current ways seniors are living now. The mix of uses encourages residents to continue to be active and engage within the local community in this innovative style of senior living.

S O C I A L

The social aspect of this project is linked with the city. The goal of this project was to make sure the aging population is addressed architecturally and creating an urban space to reach to the society outside.

N A T U R A L L I G H T

This building is oriented on its east-west axis to maximize the natural light to the building. All of the spaces were carefully oriented to have received the most natural light and encourage residents to use the space.

BON SECOURS

C I R C U L A T I O N

The circulation in this building is designed in a figure-eight shape focused around the courtyards. The residential is pushed to the perimeter allowing for easier circulation at the heart of the building.

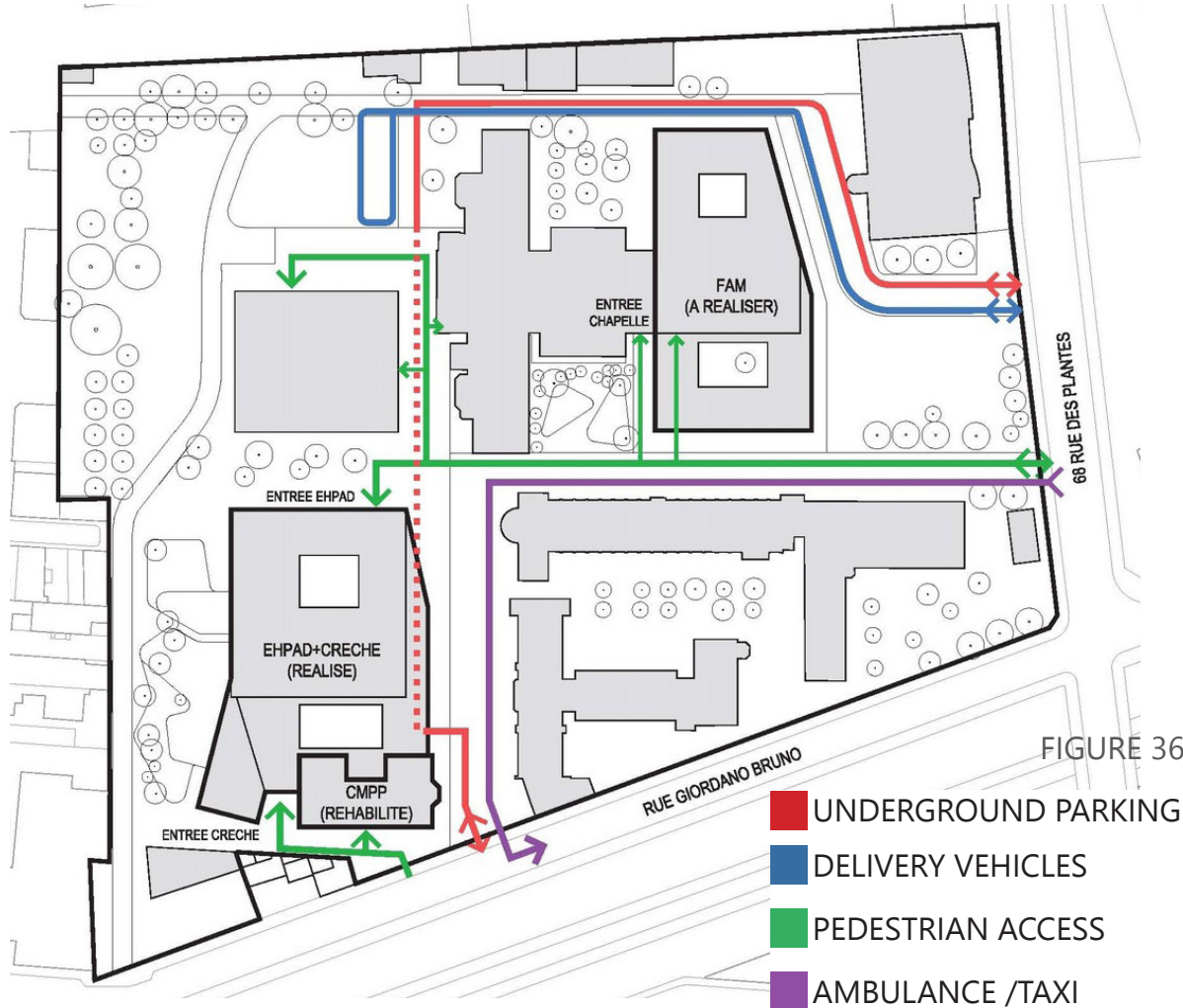


FIGURE 36

S T R U C T U R E

This building could use the same stacked structure on all levels. As the levels increase, the structure will be able to lessen as the floor becomes smaller as they increase in height.

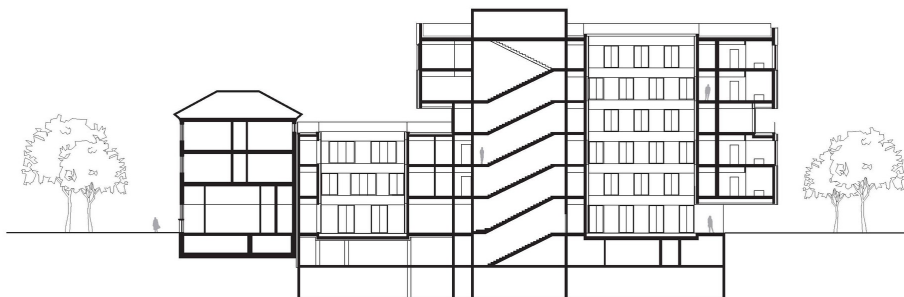


FIGURE 37

BON SECOURS

ADDITIVE TO SUBTRACTIVE

The courtyards in the building use subtractive technique. This is an effective way to get additional outdoor space and natural light into the building. The diagram below displays the subtractive pieces of the buildings.

UNIT TO WHOLE

The diagram below shows the relationship between the senior living facility and the existing buildings previously on the site. This site has history dating back to 1875 and the same architecture has been used throughout the entire complex. Other buildings are a chapel and hospital.



FIGURE 38

BON SECOURS

S P A T I A L R E L A T I O N S H I P S

This building is designed to have communal space on the third floor. The break between the residential floors will assist in providing extra space for residents and additional outdoor space. The diagram below displays the building relationship between the different spaces.

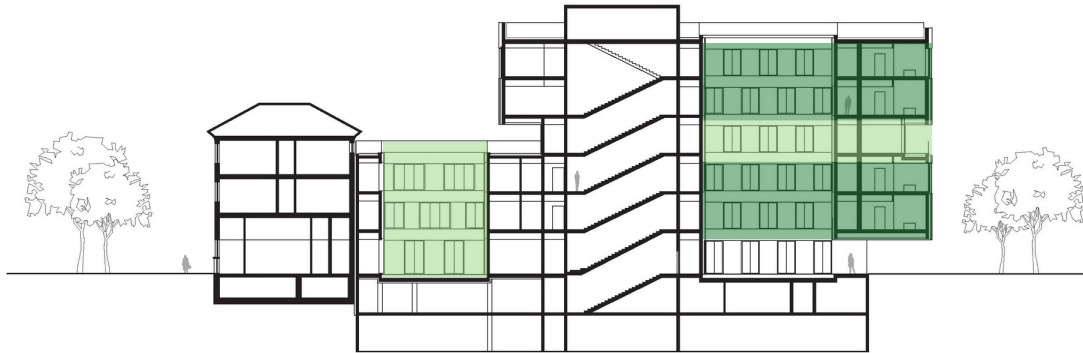


FIGURE 39

- RESIDENTIAL AREA
- COMMUNITY SPACE

M A S S I N G

The massing for this building is relatively rectangular. There is a horizontal break in the facade on the third floor which adds interest to the building. With the mass being simple, the horizontal break helps bring the eye around the building and to the rest of the site.



FIGURE 40

BON SECOURS

C O N C L U S I O N

This building took a very simplistic approach to the elderly community living. The focus in this building was not considering the health and wellness of the main inhabitants. The goal of this building was to create a space that fit into the urban context of the site and the surrounding area. The interior was focused more on providing space that allowed for residents to live. Functionally, this building would be effective with the courtyard at the center and the residents living at the perimeter. The horizontal break in the facade was also an effective technique to engage the viewer and create curiosity in the building. The first level of this building is public space. Public space in an elderly facility is very important to keep the community engaged with the elderly. The downfall for this building is that there is no reason for the public to visit the space besides seeing the elderly. There needs to be more attraction for the public to visit the site.

This building carries good learning aspects to apply to my building. I will consider the spatial relationship in my future plans for an elderly facility. Some aspects I will take the study as learning experiences and challenge to think of something more effective.

CASE STUDY SUMMARY

C O N C L U S I O N

Each study has different tools that are implemented to better the life of the aging population in living facilities. The first case study involves a senior living building that uses circulation to integrate floors, room and people. The figure eight circulation has been found to be very successful for senior living facilities. Mayerhof allows the seniors to connect with the outdoors by creating a space in the figure eight void that allows for green space and connecting the outdoors to the indoors. The Bon Secours is the other facility that allows for circulation in the building to happen in the figure eight pattern. Both buildings allow maximum natural light in the building with large windows that view to the courtyard and provide greenery for the users to enjoy. Each aspect plays an important role in the health of seniors.

Community and public space is a feature that was in each of the four studies done. Isolation is a major issue in the mental, physical and emotional health for the aging population. Each site took public space into consideration and collectively brought the seniors together by linking them with public space. Public space allows for the seniors to have outdoor space, community gardens and do other activities that are not always possible in an indoor environment. Public space in some cases, allows for the public to interact with the seniors. This is a trait that should be used in other senior facilities. Community space allows for seniors to gather together and work on crafts or play cards. There's many activities that seniors can value by just interacting with the neighbors.

CASE STUDY SUMMARY

C O N T I N U E D

Eltheto design focused on the quality of life for seniors. By focusing more on the quality of life, the transition for Seniors can be made easier. There is a study found that the life expectancy of seniors decreases when they have to move away from their normal lifestyle for health care. The Eltheto complex focused on making a place for people to call home for many years and not just when assistance is needed. Healthcare is at the center of this facility and allows for public space and the neighborhood environment to fill the space around the healthcare building. Healthcare is at the Seniors needs but is not impacting their life in a negative way.

The study of Senior living facilities is a topic that needs to be addressed more. By learning from other case studies, lessons can be learned on how to best design a facility to benefit the users. We are all going to be including the aging population and we want to continue to have a positive impact for many years to come. The neighborhood environment with a focus on the quality of life for the seniors while also incorporating society is the key to a successful senior living facility.

MAJOR PROJECT ELEMENTS

A P A R T M E N T S

Apartments will be available with care needs for residents in the building. Each room will be designed to meet essential needs of seniors.

R E T A I L

Retail areas will allow for both restaurants and stores to be present for the residents and the community to enjoy. The retail area of the current mall will be enhanced.

H E A L T H C A R E

The direct access to healthcare for the residents is designed for convenience and health benefits. Doctors, nurses and staff will be available at all times of the day.

F I T N E S S C E N T E R

The fitness center will be designed for senior activities that are most beneficial to creating a stronger, healthier resident. Activity is a large part of staying healthy.

C H A P E L

A chapel will be designed for residents to enjoy religious traditions and gatherings right at home.

G R E E N S P A C E

Courtyards will be designed into the facility to encourage residents to use the green space for relaxing or gardening. Some will be enclosed to be able to use throughout the entire year.

A C T I V I T Y R O O M

Designed for various activities for the seniors to interact with neighbors while engaging in enjoyable hobbies. Rooms will have different activities such as arts and crafts or a music room.

D A Y C A R E

The daycare is designed to engage with residents throughout the day while also creating ease for employees of the complex.

USER/CLIENT DESCRIPTION

C I T Y O F M O O R H E A D

Resort style is found at this plaza to enhance the experience of both residents and the community. The indoor and outdoor space is provided for various activities. Green roofs, terraces and community gardens help provide extra green space for all to benefit from.

S E N I O R S

Seniors will make up the largest group at the facility. The residential area will be inhabited by residents who will have most needs available without leaving. Parking will be needed for those residents who chose to still drive.

S T A F F

Staff of the complex will be needed for a variety of tasks. Care 24 hours a day will be needed for both residents and security of the building. There will need to be the most parking present for the staff members.

C O M M U N I T Y

The community is a very important aspect of this complex. Having the retail open to the public helps keep the seniors engaged and active in society. The enhanced mall will also benefit the needs of the community members. Parking for the community will need to be easily accessible to the retail area.

S T O R E K E E P E R

Store keepers and employees will be present during normal retail hours creating easy access for residents and the community to benefit from the enhanced mall. Parking will be available for store keepers and employees on site.

C H I L D R E N

Children are a benefit to a senior living facility to have such a positive effect on the residents. The childcare facility will be available to all involved with the complex as well as the FM community. No parking will be needed for the children.

D O C T O R S

Doctors and nurses will be a huge benefit to this complex. Direct access for the residents to healthcare at their own residency will be a large benefit to this complex compared to others. Doctors and nurses will need parking access on site.

SITE INFORMATION

S I T E D E S C R I P T I O N

This project will be located in a city where the mall is either failing or abandoned and senior care is needed. The goal of this project is to re-purpose an existing mall to benefit the life of seniors and enhance the retail sector of the mall. Studies have shown that re-purposing a mall costs equal to and sometimes less to remodel into more usable space.

Moorhead, Minnesota is home to the Moorhead Center Mall which is dying in active tenants. Moorhead is lacking senior care facilities that provide a positive health environment for its residents. The Moorhead Center Mall provides an opportunity to present the city with a positive environment for seniors while keeping them engaged in the active community around them.



FIGURES 41-43

SITE INFORMATION

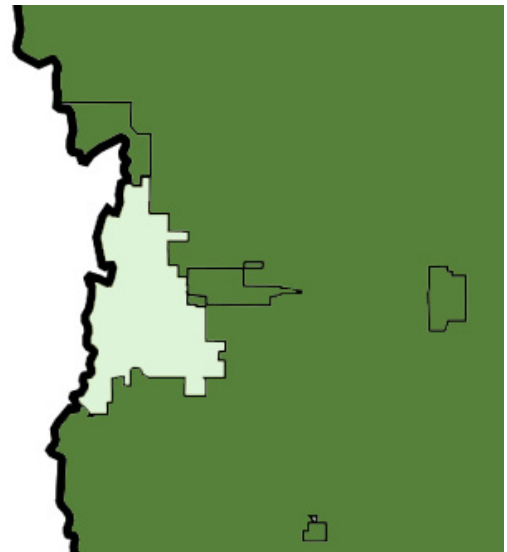
REGION | MIDWEST, UNITED STATES

Minnesota is projected have a large spike in people over the age of 65 in the coming years. A dramatic change like this will have a great impact the health care system, social services and the economy.



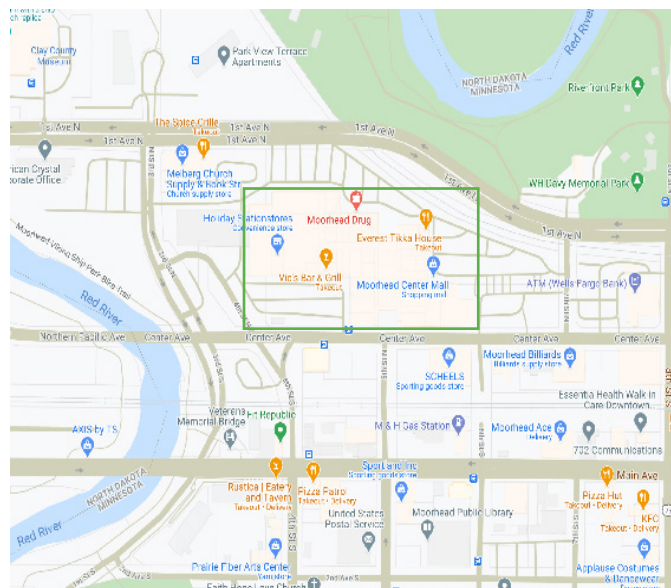
CITY | MOORHEAD, MINNESOTA

Moorhead, Minnesota is home to approximately 39,000 people and growing at a rate of 1.6% annually. About 12% of people are over the age of 65 years old.



SITE | MOORHEAD CENTER MALL

This site is located near the Red River with beautiful views and many walking paths in the area along with transportation routes located on the site. This site allows for space for the community to grow with the residents.



FIGURES 44-46

PROJECT EMPHASIS

1 E N H A N C E

Studies have shown the importances of the environment in which Seniors live in and the effects it can play on mental, physical and emotional health. Through design, the health of seniors will be emphasized ensuring that the conditions will have a positive impact on the users living and engaging in the space.

2 P R O M O T E

A design to promote the engagement with Seniors and the community around them. The interaction between society and Seniors have been proven to prevent isolation from having a negative impact on one's health.

3 A D A P T

Existing structure that is not reaching full potential presents the opportunity to benefit the community. Re-purposing the mall will enhance the life of the residents as well as the downtown Moorhead atmosphere.

GOALS FOR THESIS PROJECT

A C A D E M I C

My design will be driven by research and processes. By better understanding the topic the goal is to create an innovative senior living community at the heart of the society while also adapting existing structures to benefit seniors and society. Creating a model to better represent the needs for seniors, I hope this can be applied not only in Minnesota but in other states to realize the importance of the elderly in society. Design choices will be supported through the research during Fall semester and taken into consideration during all aspects moving forward.

P R O F E S S I O N A L

Through design, a model will be created to enhance my future career and emphasize on the importance of health and well being to the elderly. By raising awareness of this ongoing issue, my goal is to apply this to projects in my future career and help establish new trends for bettering senior living facilities.

P E R S O N A L

My goal for this project is to gain a better understanding of how designs can affect the elderly. Being very close to my grandparents, I feel passionate to better the living situation for not only them but all the future grandparents that will be living in care facilities. I want to grow through research and new findings to better myself and apply it to help others.

PLAN FOR PROCEEDING

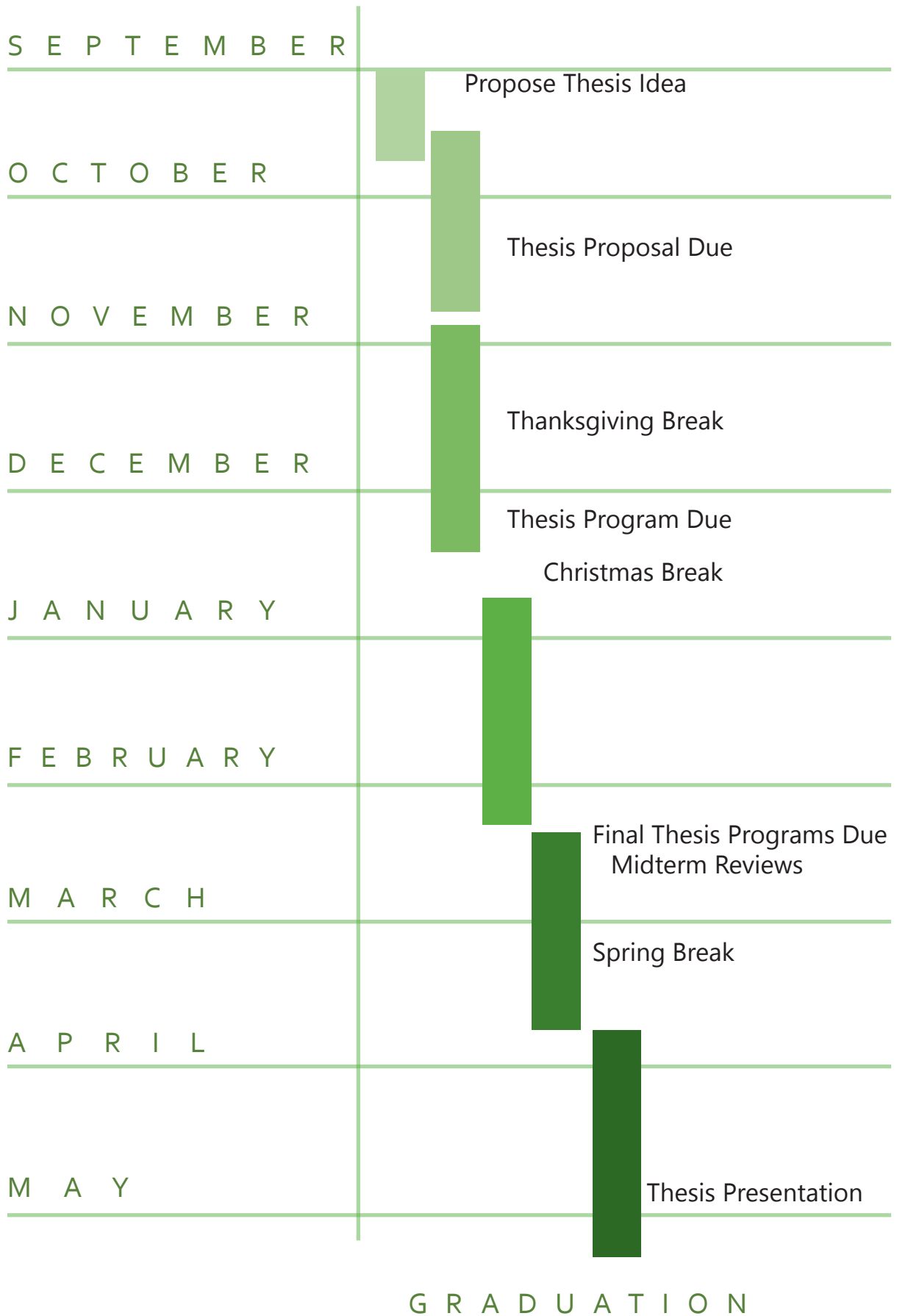
M E T H O D O L O G Y

With regards to the quality of life for the aging population, research will need to be done to become more knowledgeable and how to best represent them through design. The first step to the research will be to investigate the background of information and history related to the negative effects nursing homes have had on the population. The research findings will help best design a facility to benefit the quality of life for the seniors but also the community around them. Understanding the aging population with their lifestyles and traditions will be essential for my research. The comparison will be done to determine why an existing, abandoned facility will be more successful than creating a new facility. This research will reflect in the design and contribute to the overall elements.

Building off the knowledge learned from the research, the next step will be to determine the most important elements to create a positive environment. Visual representations will be created to help assist in applying the knowledge to an existing structure to better the life of the users.

Through this process, programs will be used to enhance the project and information contributing to the future of the thesis project. The process will continue through the spring semester to design an adaptable facility to enhance the life of the aging population in the Fargo-Moorhead area.

PLAN FOR PROCEEDING



THE
PROGRAM

RESEARCH RESULTS

P H I L O S O P H I C A L

Gathering information through a combination of strategies: qualitative research, case studies and conclusions to correlation studies to best create a Senior Living Community. Using this information, the optimal elements and design will apply to this living community as well as many to come. The findings from my research will ensure the relationship between the residents, the building and the elements will all correlate together to create efficient design.

T H E O R E T I C A L

Aging is a part of life which challenges each individual differently. The transition through aging has been found to create negative impacts on the elderly generation if it is not done right. Independence is a strong part of keeping happiness through aging while also having the ability to stay in a home for as long as possible. Most inefficiencies in the body occur through the five senses. As our five senses start to become less useful our ability to function as well is also affected. About 94% of the 65+ population experiences at least one sensory deficit and at least one modality and 28% have experienced losses in three or more senses (Housing Design). While considering all these factors that affect the aging process, the intent of this project is to create a space that allows the aging individuals to continue to keep independence and live in a community that allows the transition to be made possible as needed for each. The research provides evidence to establish the elements and needs for the continuing growing population of elderly for future generations to come.

CONTEXT

S T R A T E G I E S

Qualitative research discovered findings to best enhance the living experience of the elderly. Data was collected on daily tasks and activities and precise times to investigate the living habits, needs and challenges for the generation. Throughout the findings, the specific tasks and needs for each individual will be implemented into the project. The relationship between the users and the activity will determine the importance of the implementation in the building. The findings will be translated into the building to create the program based on the existing space.

Each factor is determined among the importance within the program. The qualitative study provided information to rank the top ten needs in a senior living community with ranking the most necessary. Components are characterized to explain function within the building.

Precedent studies provided examples of the program elements which will contribute to the design. The spatial relationships between elements as well as interior design features will be analyzed to understand the emotional effects on the elderly population.

CONTEXT

H I S T O R Y

1713

One of the earliest organizations designed specifically to care for the elderly, "Friends Almhouse of Philadelphia" is founded. The picture to the left is the building which housed the organization.



1935



The Social Security Act is passed in response to The Great Depression, which resulted in half the senior population living in poverty. It is the first universal federal welfare program for the elderly. This act was signed by President Roosevelt as seen in the picture to the left.

1974

The first hospice program was founded by Florence Wald. She became known as the mother of the American hospice movement. This program provided at home care which was the first in the United States.



2011 - 2030



The "Retirement Wave" begins, with the first Baby Boomers turning 65. Between 2011 and 2030, 79 million Baby Boomers will retire, or about 10,000 people per day. This trend is only supposed to continue with many people living much longer than ever before.

FIGURES 48-51

CONTEXT

HISTORICAL CONTEXT

Aging has existed since the beginning of humans. The thought of becoming “old” was not truly considered until 44 BC. Looking back to this time, the first thought was written by Cicero describing the subject of aging and death in his essay, “On Old Age”. As time continued, humans continued to age and death came at an earlier age. The importance of health and wellness has increased the life expectancy of individuals over hundreds of years. With longer life expectancy, the importance of caring for our elderly did not become a strong issue until the 1900’s. About ten years into the 1900’s, aging was first recognized as a social issue with poverty becoming a normal for the elderly lifestyle. Many years later, the first universal federal welfare program was created for the elderly population. This was created in response to the Great Depression; with over 50% of the elderly population living in poverty. As the years got closer to the 2000’s, the nursing home industry began and soon erupted. In 16 years, the industry increased by 302% (“The History of Senior Care”). The nursing home industry was labeled as “a place to die” for many years. Throughout the years, the variety of assistance and needs for the elderly population has changed. Depending on the lifestyle of the elderly who is starting to consider living in a new place, the wide variety of options has continued to make the aging process easier. As designers continue to learn more about the aging process, the lifestyle changes, and the emotional effects the goal is to continue to emphasize the need for assisting and caring for the growing elderly population.

CONTEXT

SOCIAL TRENDS

A huge social trend going on among the elderly population is aging in place. Aging in place is a concept which allows residents the opportunity to remain in the living communities as they age and adapt to the needs and abilities of the individual ("The History of Senior Care"). The health of an older individual is affected when major life changes occur later in life such as leaving a home or significant changes to one's lifestyle. Aging in place allows for the older population to be less affected by the changes in life but also allows for the adaptability that is needed.

SOCIAL CONTEXT

On average about 10,000 individuals per day are expected to retire until 2030. The baby boomer generation is only starting to retire and there is expected to be 1 in 5 Minnesotans to be retired in the coming years from this generation. This generation is not interested in moving into nursing homes but more focused on communities which will allow for social interaction and assistance when needed. Older individuals find keeping independence one of the main reasons for not wanting to make the transition. This is going to continue as the age expectancy and health of individuals continue to improve for the older population.

PROJECT JUSTIFICATION

The design of a housing for the older population plays a large role in the health and well being of an individual. The transition between independent living and assisted or nursing homes has been found to greatly decline the health of one and this transition is going to need to be improved. By working with older individuals, I will investigate daily tasks and activities that are most popular and reflect a positive need for them to be continued. This data will help display the needs of individuals living in situations like this and those who plan to make the transition soon.

By gathering research and data, I will discover the connection between the design elements and the impact it has on each person working and living in the facility. This data will be represented through architecture in my design to establish a more effective way for senior living. A relationship between society and seniors has been found to better the health in all aspects for the seniors. This relationship will be one of the driving factors for the site and design of the project. Each design element will be related to everyday life and the reflection it plays. The end results will display the argument for the rework of the senior living facility and further the design and how it can impact the residents and the community.

My thesis project this semester will show how design can positively impact the transition and life of the aging population. Through research, I will develop a program of details and needs that will benefit the users of the building. As I plan to use an existing building, this will help aid the growing environmental issue of empty buildings. This project is very important to society. Every person is going to continue to grow old. As a designer, I feel like it is part of my duty to research the needs of the elderly individuals and create a space that is going to have a positive impact. Senior living is a growing issue that needs to be addressed and improved for future generations to come.

PROJECT JUSTIFICATION

Growing up, my grandparents have heavily been involved in my life. From babysitting to daily lunch dates, as a young child I almost spent every day with them. Having my grandparents in my life, allowed me to learn so many great lifelong lessons on a daily basis. As the aging population does, their health started to decline and I realized that they weren't going to live in "Grandma and Grandpa's" house forever. As our family started the transition into some kind of senior living facility, I became more aware of the situation. During the search, we felt defeated at times looking for the 'perfect' place to call home. The transition was a very important factor for them as they were not ready to be fully in an assisted living situation but wanted the independence characteristic with the opportunity for help if needed. I feel very inspired to find a solution to issue senior living in our community. Not only do I wish this could benefit my grandparents but I hope it helps improve the life of all other grandpa and grandmas and those who will be one down the road.

At this point in my education and professional development, the thesis project presents an opportunity to enhance my knowledge and design skills. Through undergrad, I learned computer skills and knowledge that will be applied throughout this project. My design skills have advanced with the assistance of my professors during each semester encouraging me to challenge myself. The research will enhance my knowledge about the design field and the relationship with the elderly population. As I continue to learn about design, I look forward to applying my research and information to my future career in the hopes of designing a community like this. As a graduate student, we are responsible for creating our own goals, program elements and research to continue to enhance our education and the application it can be used towards. I feel encouraged to continue to educate myself to better my design skills throughout my education and my future professional career.

LITERATURE REVIEW

TITLE: NAVIGATING ASSISTED LIVING

AUTHOR: KRISTI STALDER

As we age and life changes, there are lots of different paths that need to be considered for our loved ones. This book gives very important information about assisted living, the transition and the key details to make the best decision. Kristi, the author, has been part of the assisted living community for many years working as facility director. With her experience, she was able to see that many people enter the transition with little education on the very important basics that needed to be known. Focusing on the assisted living division of the elderly housing options, Kristi provides her experiences and recommendations about the best way to handle and learn about assisted living.

The response of the elderly to a transitional situation is the most difficult situation. The book expresses the most important details between the different living situations. Assisted living facilities include permanent housing where the goal is to maintain resident cognitive and physical level through assistance. A skilled nursing facility is temporary housing and care with the goal of rehabilitation and cognitive/physical improvements to return to normal living situations. Two other options include independent and retirement living. These two types of options do not include nursing oversight and are typically less expensive. Assisted living is the step in between independent living and a nursing home. All 55 years and older will be assisted in daily activities by the CNAs. Health assessments are done prior to entering an assisted living facility to confirm that the proper care will be given to each resident.

LITERATURE REVIEW

The function of any elderly facility is very important. State surveys are required by those residents who are part of Medicare programs to receive feedback and information about potential issues in a care facility. Elderly abuse is a hot topic around the aging population. This situation has been a common occurrence in homes that don't have proper guidance from facility directors and professional workers who care for the residents. By addressing the state surveys, it is important to see the feedback and how the facility has improved for the better. Kristi addressed the importance of this topic and the impact that it can have on the elderly who are making the transition and those residents already living in a facility. The author also put great stress on the importance of the faculty and the impact it has on how the facility runs. Positive in a living facility leading to a compassionate culture. This also helps encourage the residents to engage in activities and social functions.

Kristi has created the complete guide on the education that is needed when starting the transition for a loved one for the first time. The standard information is very important to realize most people are not educated on. Her book expresses the importance of creating an experience that is going to leave a positive impact on the elderly due to the extremely hard transition it is going to be for them. I think her experience in the field creates a bundle of knowledge which one would not know without those experiences. It guides the community in addressing factors of the assisted living division that need to be fixed or adjusted. This information will impact the elderly community in my project to ensure these existing situations are altered to have a greater positive impact on the aging population.

LITERATURE REVIEW

TITLE: THE RELATIONSHIP OF ELDERLY TOWARD THEIR HOME AND LIVING ENVIRONMENT

AUTHOR: Boštjan KERBLER, Richard SENDI, Maša FILIPOVI HRAST

The relationship towards one's home becomes stronger as one grows older. This review provides data to display the relationship of one towards their home and the impact this has on the transition into a different home. "Having- Loving- Being" is a statement provided to describe how the relationship works. Having stands for housing properties that determine the quality of life as a material source. Loving represents how housing fulfills the human needs for social contract, partnership, and creating a feeling of household, family and community. Being shows the need for self realisation and expression of an individual to personal identity and improvements. As we age, our relationship towards our homes continue to change and continue to grow stronger.

The viewpoints from the authors come from many studies done among the elderly community. The authors have a strong argument displaying as one lives in a space longer and becomes older the bond with one's home is expected to be much stronger compared to someone who has always rented a home or moved many times as they have aged. The levels of attachment can have a variety of different effects on someone, both positive and negative. As the author explains each study, attachment is broken down into characteristics and described through each study to easier explain to the viewer.

Attachment can be broken down into these categories: neighbors, place identity, rootedness, genealogy and economic, and emotional. Each of these categories can have a positive and negative effect on the individual. One's good health results in more neighborhood interaction which can leave a positive impact on life compared to others who have poor health and need the place to create a sense of identity but then leaves the individual feeling isolated from the community.

"Homes are more than just dwellings, they are filled with personal meanings."

LITERATURE REVIEW

The older generation are generally not willing to change their ways of every day living. As most elderly people do not see an issue with their living situation, that results in no need for a change according to them. The elderly are in need of the sense of satisfaction for taking care of their own home. Care and ownership of a home is related to higher self esteem and happiness for the elderly community. Staying at home allows for the older population to keep independence which is one of the most important factors for those that might be making the transition to move.

In conclusion, the elderly population creates a strong bond with their living environment the longer the individual stays in a location. The consideration of these for design is going to be important. Each circumstance is going to be unique, but creating a space that feels like home to residents will be key to making the transition process easier for those who have lived independently for the majority of their life.

TITLE: HOUSING DESIGN FOR AN INCREASINGLY OLDER POPULATION
AUTHOR: KRISTI STALDER

Designing a living facility for the older population presents its challenges. The book "Housing Design for an Increasingly Older Population" helps create viewpoints from a resident perspective on features that are more beneficial to them and the typical lifestyle among the elders. The author stresses the importance of understanding the physical and mental changes that individuals experience through the aging process. By having a greater understanding of this, a senior living facility design will have much greater success and impact on the residents.

LITERATURE REVIEW

The author of this book creates an argument to address the importance of the resident's feelings and emotions in the space. Compared to other literatures, this book expresses why the residents are the most important aspect when designing a space for the elderly. As a young individual, we have yet to face the challenges and emotions that the elderly are continuing to face on a daily. The recommendations within this book account for many recommendations learned from previous projects and the effects it has played on the residents. Hearing from the experience gives a greater point of view of how to better design a space to fit a variety of lifestyles compared to create more of a "nursing home facility" atmosphere.

Independence is the greatest challenge that the elderly feel. As we age, our independence starts to become halted through the changes in our sensory modalities. The key sensory features take away the ability for bodies to function exactly how they used to at a young age. The first sensory function to start seeing decline is vision. One's vision can start to be affected at the young age of 40 years old. Visual impairments create a challenge for walking as well as preparing meals and managing medication. Hearing loss is another issue that the older population experiences. After the age of 70 years old, 34% of men and 21% of women have issues with hearing loss. Taste and smell can be the most drastic changes for an individual. Many elderly struggles with the issue of eating. With the lack of smell and taste, residents begin to be uninterested in food which can lead to depression. Each of these sensory losses are important to consider during design. Individuals are going to experience each loss differently compared to their neighbor, but the environment needs to address all needs of sensory functions.

The older population each has a variety of different levels of independence. There are six important tasks that establish the level that one is at: feeding, bathing, dressing, toileting, walking, and getting in and out of a chair. These six activities can determine the level of care needed for an individual. Those who can live independently must show the ability for six more instrumental activities for daily living: cooking, heavy household work, using a telephone, shopping, light housework, and keeping track of finances. The importance of independence for the elderly comes with the safety and security that one can create for themselves by having the ability to do daily activities.

LITERATURE REVIEW

Design concepts and ideas that contribute to a successful design are discussed and argued in this book. With the earlier discussion of daily activities and sensory issues that take place as we age, the design of a home where one is going to grow older is very influential on the individual. The site must be easily accessible for family and friends to make frequent stops. Interaction with the community is a factor that must be considered. Found from prior research, individuals have stronger mental, emotional, and physical health when involved with the community around them. Both this literature review and prior research addresses my argument of the importance of keeping the elderly involved within society. The aspect of creating a space without disclosure from the outside world is one of the reasons for the combination of senior living with retail. The attention to convenience for guests and visitors provides no excuses for visits to both the living facility and the retail area.

The connection to the outdoors must be considered within a design. Nature can have a powerful impact on a human to help heal, protect, and calm. Depending on the climate, this becomes more important. In a climate like Minnesota, the weather is not as nice most of the year. By incorporating the outdoors on the inside, residents will be able to enjoy the outside while staying warm on the inside. The Red River creates a backdrop for residents to enjoy views and nature around the building. Atrium can also be introduced to senior design to incorporate additional nature. Any type of nature for seniors to be exposed to encourages social interaction and exercise. The nature around the building can assist in making the building more approachable, friendly and non-institutional looking. Residents want a space that makes them feel welcome and comforted when making the transition from their home.

The author next discusses the importance of exercise for the elderly population. This argument I strongly agree with due to my personal experiences with exercise and the priority it needs to hold to every individual. No matter what the age is, daily exercise is so impactful.

LITERATURE REVIEW

Studies have shown that keeping the older population walking every day has been found to be one of the most valuable daily activities. Noted in the book, walking paths throughout the building will help encourage residents to walk daily and without even realizing the strong impact it has. Placing benches every 25-40 feet on walking paths also helps encourage residents who might be intimidated by the long, large paths. The benefits that come with daily exercise for any age provides more confidence and greater health for the individual. By emphasizing the need for exercise throughout this building, the residents can see the health benefits that come from daily exercise. Part of this argument touches on the education and generation priorities as we age. Generations before us have not prioritized the importance of health and wellbeing compared to those growing up now. The influence of consistent exercising individuals compared to those who do not exercise consistently continue to have a great chance of health issues that will impact as individuals age. The design can assist in creating space that allows the resident to walk to a variety of places in the building for additional daily exercise.

Interior design and layout of a facility is argued to be very effective when creating a space to reach the emotions of the user. The importance of specific functions, patterns and colors placed in the correct spot can impact the seniors. The author presents 20 of the most important interior design features to influence those using and living in this building. The connection with previous research, confirms that benefit of social interaction of the residents with the public. To keep this in mind, the author always discussed the need for welcoming family and friends. The staff take a large part in making sure that those visiting feel welcomed but the atmosphere also needs to be welcoming. Residents find the visits most beneficial when activities involve the visitors such as a restaurant like setting or enjoying the outdoors together. The primary source of circulation within the senior living facility should include the main paths of residents and visitors. The author argues the energy guests bring into the building encourages the residents to be active and interact among neighbors and visitors.

LITERATURE REVIEW

In conclusion, the author argues strong points that need to be included for the senior living facility. Each point referred to in the above review had previous experience to defend the reasoning. The author provides detail into how each small feature in the building can leave a lasting impact on the residents. Looking at a project like this from a resident's viewpoint can be challenging due to our lack of personal experience with aging and the challenges on faces. As addressed in more detail above, the lifestyle of everyone that is choosing to reside in a community home needs to feel a welcoming atmosphere that meets the style of life that one has lived. By designing a space that reaches a greater variety of lifestyles, more residents will feel welcomed into the space and feel an easier transition. The aging population is a group that continues to grow larger and more prominent among the society. The importance of creating a space for the elderly is a growing issue that needs to continue to be addressed and improved through design.

TITLE: DAILY ROUTINES

INTERVIEW: DAILY HABITS OF THE AGING POPULATION

Users of the building are the focus when it comes to designing a facility for the aging population. My research has been focused mainly on the history of creating a space designed specifically for the variety of lifestyles and the emotions the user feels. The perspective of the user is a very valuable viewpoint to see while designing because we have not yet faced the challenges that the aging population encounters for many tasks. To learn the perspective and daily habits of individuals I have taken two different types of living situation and compared their daily routines and habits between the two. The two groups are similar in age, 80s, with similar habits but due to their living situations, the difference can be seen in how each interacts with society and daily activities. It is important to keep in mind the current circumstances of the global pandemic that is taking place which may have slightly adjusted the routines of each group.

LITERATURE REVIEW

Group A resides in a senior living community in Minnesota which offers independent living, assisted living, care suits and memory care apartments. Group B lives independently in a twin home with no assistance or community atmosphere. Between the two groups, there is a lot of similarities, but the few difference contributes to the living situation of the groups. One important factor between the two groups is the location. Group A lives in a suburb of Minneapolis, Burnsville, with a population of over 61,000 compared to group B who resides in a much smaller city, Langdon, North Dakota with a population of 1,700 people.

Initially I asked both groups to track each daily activity for one week. Hours of each day displayed the activity or the routine. As the charts came in, I started to analyze the results and patterns for the aging population. My focus of analyzing the patterns was looking at the interaction between community or with neighbors in general. A large part about senior living communities is the influence of social activities. I wanted to analyze if those who do not live in a senior community are as social compared to those who live in a community. The other focus of my analyzation came from the exercise and movement patterns. The movement and exercise of the older generation is key to keeping your body healthy and in shape. Between the two patterns I focused on, I was able to discover other patterns that the individuals showed and routines that were created.

Findings from group A will be addressed first. Group A is the individuals who currently reside in an independent living apartment that is in a Senior living Community. Some of the individuals that were part of my study, have recently moved into the community, and were not a fan of the idea from the beginning. I was most interested in their results from moving to a community from previously living independently and analyzing their social habits. Group A also does not have their own car, ride shares are provided by the facility or family members are available to provide rides.

LITERATURE REVIEW

Group A seemed to have more hobby time compared to the other group. Hobby time for the group included coloring, decorating, and baking at many times throughout the day. Within the community, an Arts and Crafts room has listed which provide space to color or do the craft provided. One important factor to point out with the arts and crafts room is the social aspect it has compared to those who are not in a community. Even with going to this room to color, which was a task done many times throughout the week, there was always other individuals to socialize with in the room. Another interesting pattern by group A is the frequent phone calls to family and friends. Every day the individuals made phones to other outside the facility to catch up or chat. This also led to the more frequent gatherings with friends. About every other day group A was able to socializing with others in the building for a few hours. As addressed before, socializing can be very influential on a resident to keep them engaged within the community as well as prevent depression and isolation.

Group B are the individuals who do not live in a senior community but live in a much smaller town compared to group A. The patterns from group B were slightly different due to the socializing situation and the ability to drive. Group B was able to run more errands and be more productive. With the ability to still drive, there are advantages to picking up the newspaper at the local gas station or even getting groceries. Group B has more daily activities that the individuals did independently. Card playing seemed to be more of a frequent hobby compared to coloring. Any type of hobby for the aging population is something great to fill time with. Some of the older generation feels lost with the transition from work or maybe the grandchildren getting older and busier. I thought it was interesting to see the workout patterns. Group B worked out every morning in their home and was very consistent with this. I love to see this for the aging population and the effects it can have on them.

LITERATURE REVIEW

Between the two groups the timing of the patterns and daily activities were almost identical. The generation of these groups has been a generation which always keeps true to routines. As we age, routines and daily patterns become more important and more relevant. All days started between 6-7 am. Each person would wake up to coffee and breakfast before starting their day. Lunch would follow soon after always hitting right at noon. As we get older, sleep becomes more important and most had afternoon naps following lunch. The most socializing for both groups occurred in the afternoon. There was generally an hour or two of group socializing followed by dinner time between 5-6 pm. The weekly patterns included weekly worship and social gathers regarding happy hour or coffee time.

This study helps address the daily activities of the aging population. As someone who is very young, doing a study like this helps better understand the routines and daily activities of someone in their 80s. The lifestyle adjustment we naturally start making during the different periods of life. During our younger days of school, we live very busy schedules normally with help from our parents to keep organized between the different activities. The next stage of life welcomes the independent aspect of life which results in more responsibilities and can be challenged with children and careers. Post career, an individual many feel challenged to continue the busy schedule that once filled their life. By investigating the patterns of individuals who used to fill their days with careers and children, the perspective is more detailed on the current ways to fill one's day.

LITERATURE REVIEW

S U M M A R Y

Between the different books, articles and interviews the aging population is unique. Each generation that continues to get older has a variety of routines and patterns which are altered by their life and experiences. The culture of growing up in a specific place somewhat alters each generation to be more unique in a sense of lifestyle. The lifestyle of one is ever changing and each author addressed what made the grow special and the challenges that were faced throughout the aging population. The most influential piece from a design aspect that came from each literature review was creating a space that was for all lifestyles. The lifestyle for each individual who steps foot into a senior living community is going to be different and each one needs to be addressed through the design. This will be one of the most challenging aspects of creating a living community. Learning from others and the details that can be incorporated to make everyone feel at home will be most important. The book "Housing Design for an Increasingly Older Population" addressed not only the design aspect but also the interior features that create the emotions and feeling of home. The perspective of feeling comes differently to everyone and how our sensory feelings play off our surroundings. Interior materials and features will help contribute to creating a place that many people will call home.

Although we can not first hand experience the challenges of aging we can continue to learn more about the emotions and struggles that will come to us with time. As we design it is important to remind yourself of the challenges that you might not face now but put yourself in the shoes of your older self while creating a space for the older population.

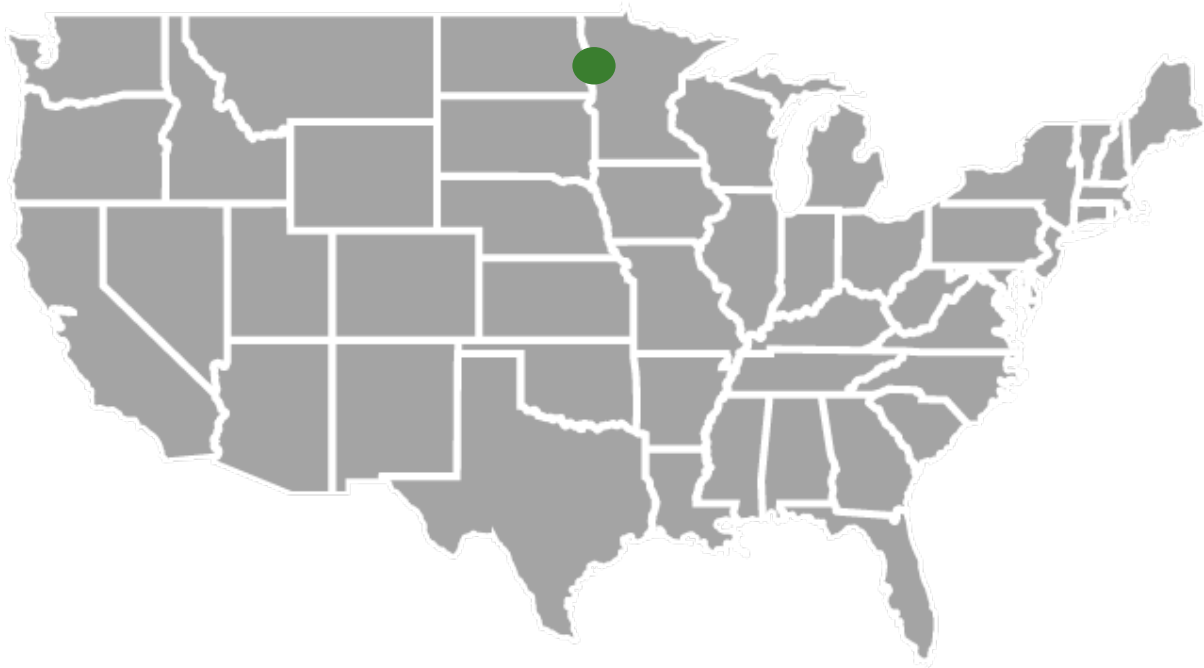
SITE ANALYSIS

MOORHEAD, MINNESOTA



FIGURE 52

CITY INFORMATION



MOORHEAD, MINNESOTA
POPULATION: 38,065
COUNTY: CLAY
CITY AREA: 22 SQ MI
TWIN CITY: FARGO, ND

DEMOGRAPHICS	
FEMALES:	19,626
MALES:	18,439
AGES:	
0-20:	10,698
21-44:	15,212
45-64:	7,771
65-84:	3,543
85+ :	840

FIGURE 53

SITE INFORMATION



FIGURE 54

The site chosen for my project is the site of the existing Moorhead Center Mall. This mall is one which is not filled with many stores and lacks any type of interaction with the community. The city is working towards bettering the downtown area of Moorhead. The mall provides an opportunity to enhance the downtown experience while also creating a design that is going to benefit the community for many generations to come.

ZONING

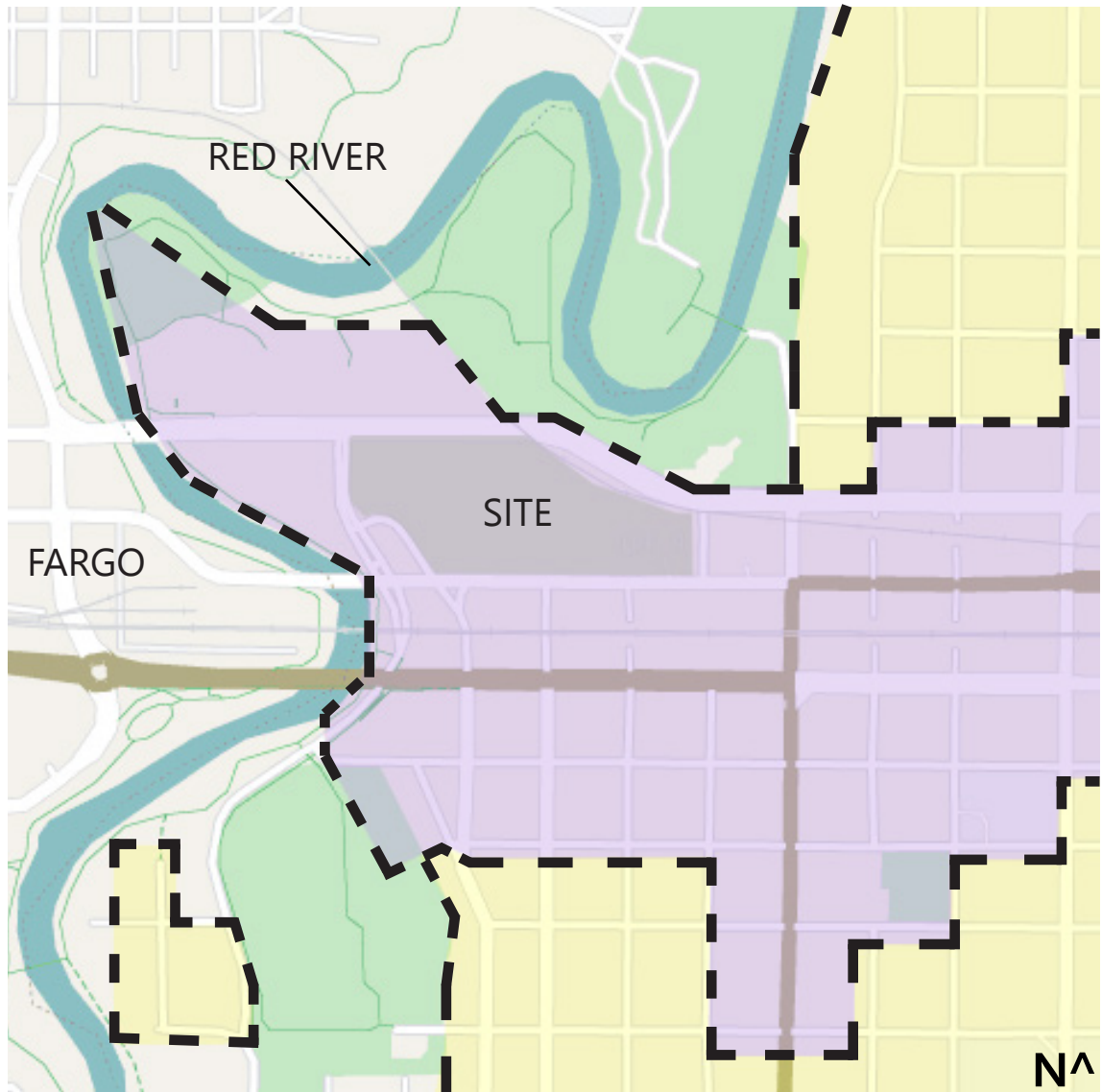


FIGURE 55

DOWNTOWN MIXED USE

Downtown Mixed use is represented by the purple on the map. This large area allows for building to have a variety of different uses and create a more diverse area. It leaves opportunities for residential, a variety of industries, event venues, and promotes a pedestrian safe area.

RESIDENTIAL

The residential area has a variety of different levels of densities on the zoning map. All zoned together above in yellow to show the areas where single family homes are located with limited outbuildings allowed. Outbuildings include private garages, parking spaces and carports.

CLIMATE INFORMATION

ANNUAL CLIMATE RECORDS

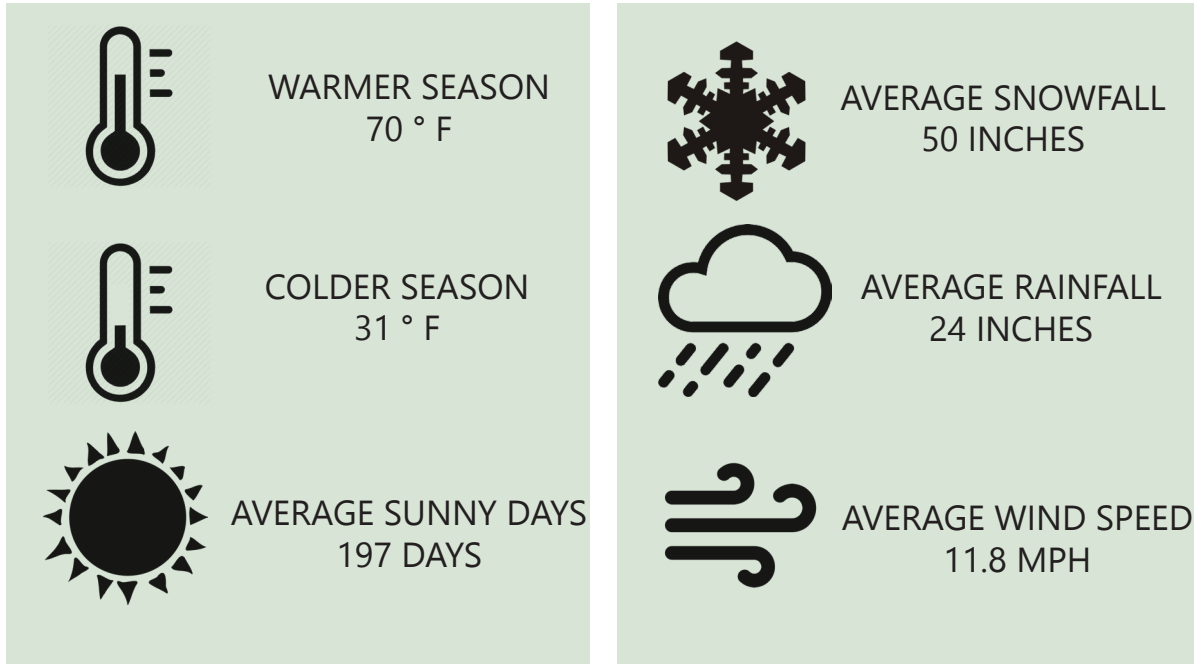


FIGURE 56

Moorhead has a very long, cold winter compared to most other places. The temperature ranges are drastic due to the hot summers and dark, cold winters. On average the temperature in the winter months is below 31 degrees compared to the summer months the average daily high is around 80 degrees. January to February create Moorhead as a much colder place when temperatures can drop into the negatives quite frequently. The cold winter months typically last from early November to the middle-end of March. This can vary depending on the year as sometimes the colder months stay around longer than are welcomed. The warmer months in Moorhead last from May to September allowing the community to take advantage of the nice days. The city receives a decent amount of precipitation throughout the year with an average of about 50 inches of snow per year and 24 inches of rain. The wind in the city of Moorhead generally sees greater speeds between the months of September to May. The stronger wind times typically come from the north which also affects the temperature during the winter times. The warmer, summer months present higher temperatures and lower wind.

CLIMATE INFORMATION

Average Hours of Daylight

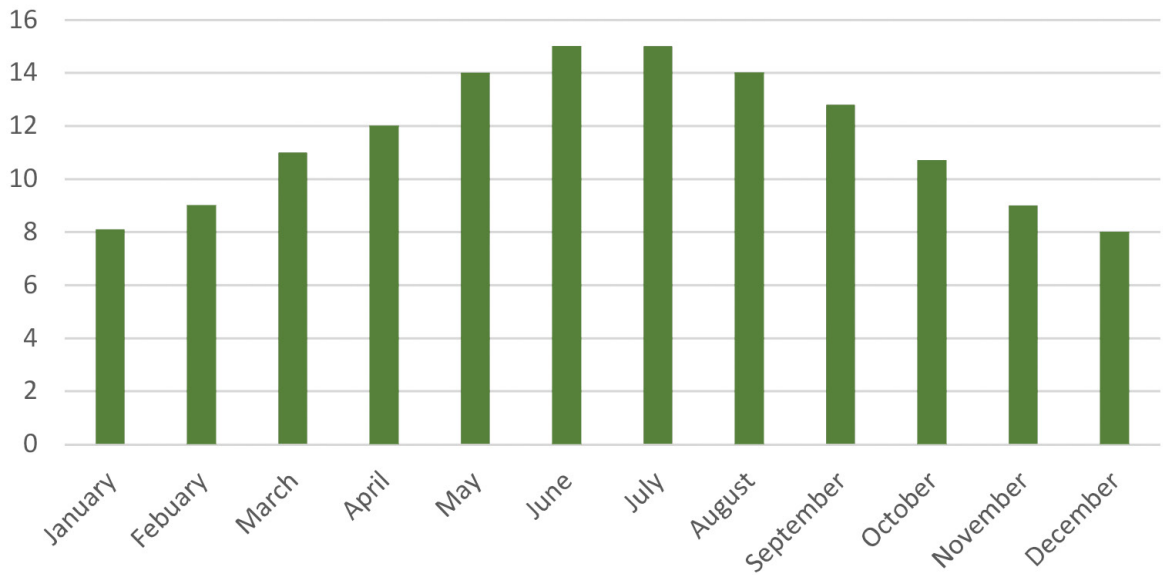


FIGURE 57

Hours of daylight in the area is very important regarding mental health for the residents. During the long, cold winters some days there is very little daylight. This will need to be factored into my design to ensure that the residents do not get down during these months.

Average High Temperatures

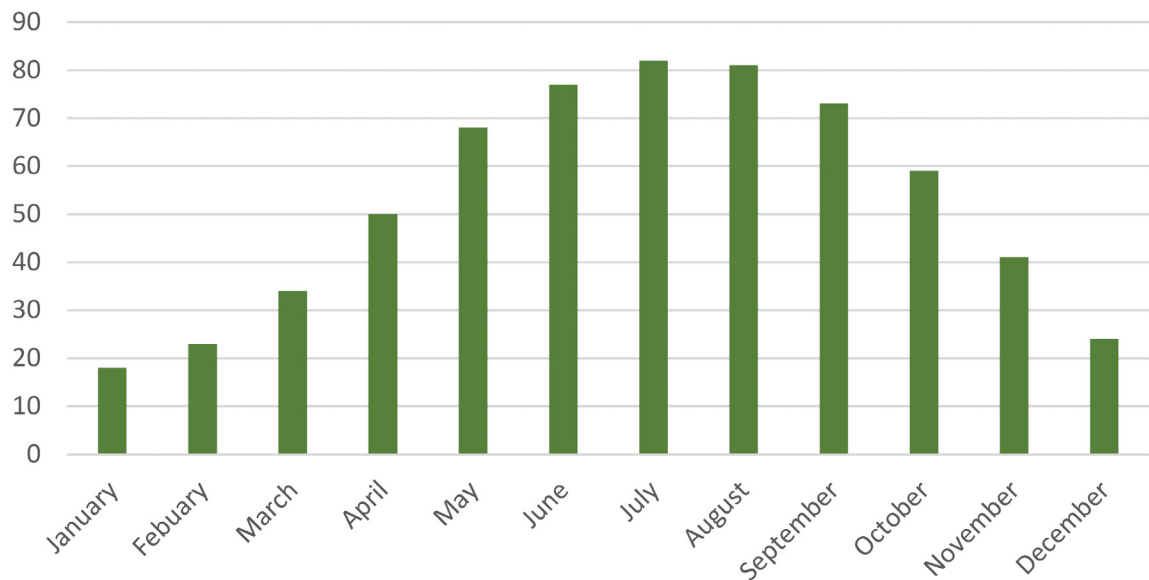


FIGURE 58

Looking at the high temperatures during all months will all the design to be impacted through seeing the very low temperatures for multiple months in a row. This is a factor that must be considered to create a space that residents can enjoy that can either be similar to the outdoors or see the outdoors with warmer temperatures inside.

RED RIVER

The Red River provides a border between the states of Minnesota and North Dakota. As the only river which flows north, the red river empties into Lake Winnipeg and then travels into Hudson Bay. During the travels north, the water flows 550 miles from start to finish.



The Red River falls into the hazardous category due to its damming and fluctuating water levels during flooding times. Muddy banks are tree covered in most areas and can cause difficulty accessing the river.



Clay soils in the Red River create a brown tone in the water during the summer months. The visibility in the summer is only about two inches which can cause difficulty seeing underwater obstructions. During the winter months, the visibility is generally between 12-18 inches deep.



FIGURES 59-61

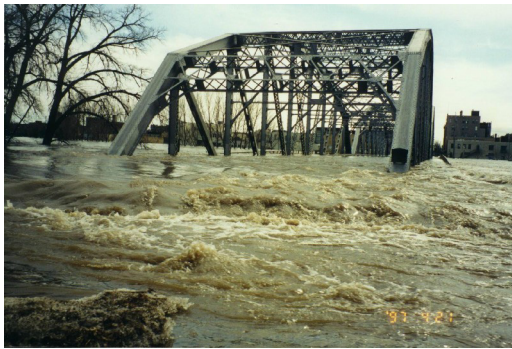
HISTORIC FLOODS

1826

The Red River is known for its historic floods in very wet years. The first historic flood dates back to 1826 where the first flood of the Red River left an impact on the city of Winnipeg. The picture to the right is flood water impacting Jones Hall in Fargo.



1997



Three billion dollars in damage was the result of the 1997 flood. The picture to the left is displaying the bridge in Grand Forks, North Dakota. East Grand Forks, MN and Grand Forks, ND had the greatest effect from the flood with Fargo, North Dakota not far behind with large amounts of damage as well.

2009

The 2009 flood presented troubles for the Fargo-Moorhead area. This flood surpassed the levels of the river from the 1997 flood and crested at 40.82 feet. The picture to the right shows sandbagging in the Woodcrest neighborhood in Fargo, ND. Two-million sandbags were filled to save the city.



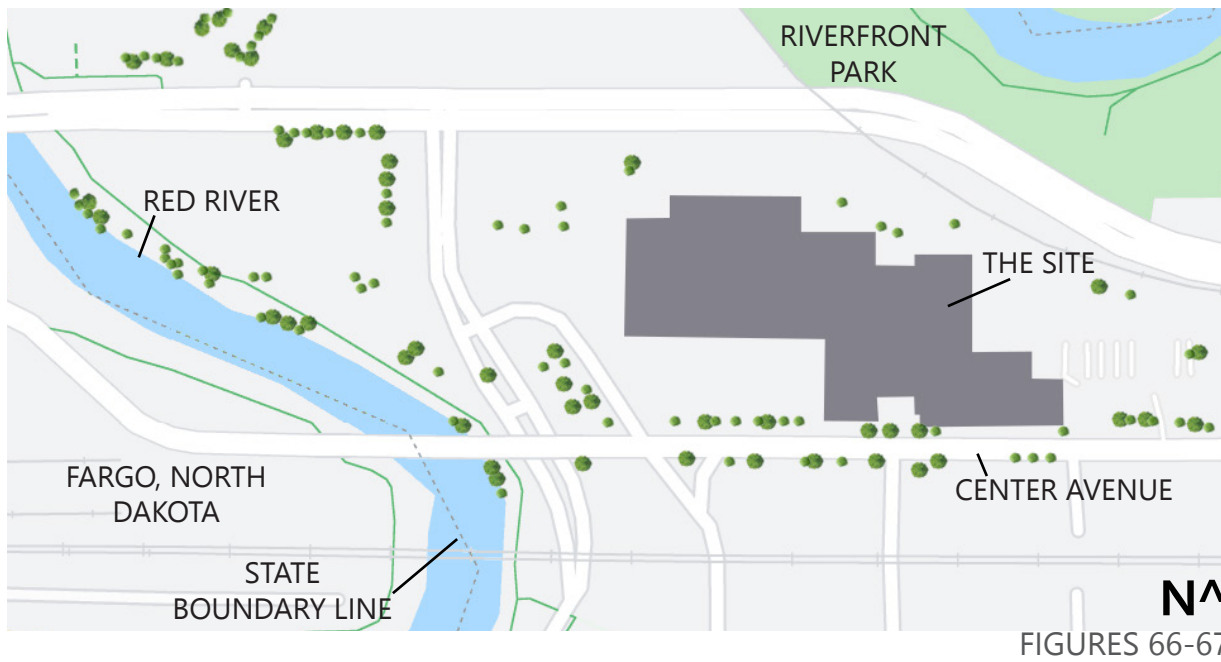
2011



The last large flood happened in 2011, following suit of the 2009 flood. The crest in 2011 happened mid-April presenting the city with lots of water to monitor. The picture to the left displays the Main Avenue bridge that connects Fargo and Moorhead together and the high waters underneath.

FIGURES 62-65

VEGETATION



VEGETATION LEGEND



TREES



PARK LAND

POPULAR TREES AROUND MOORHEAD



ELM TREE



FIR TREE



CRUSADER
HAWTHORN

VEGETATION

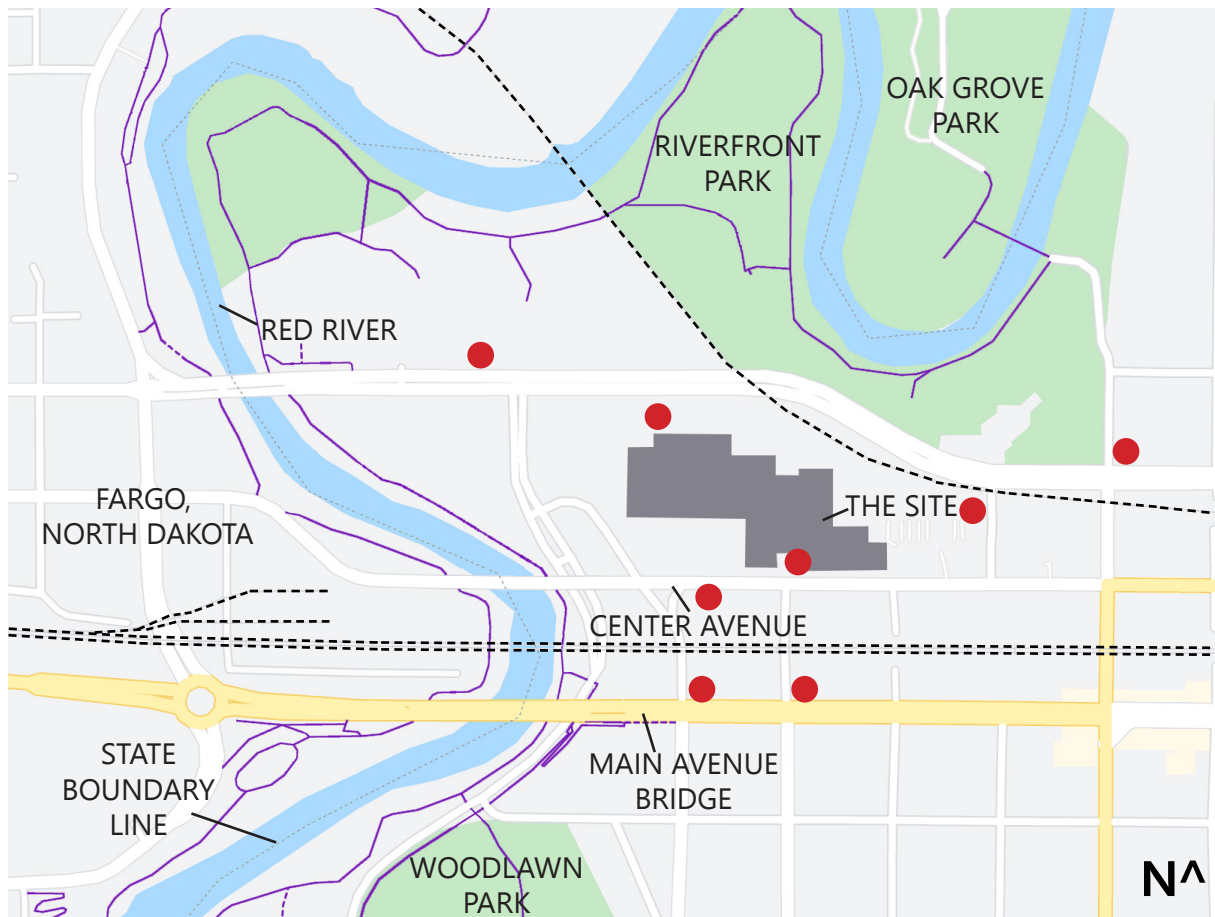


VIEW LOOKING WEST TOWARDS RIVER



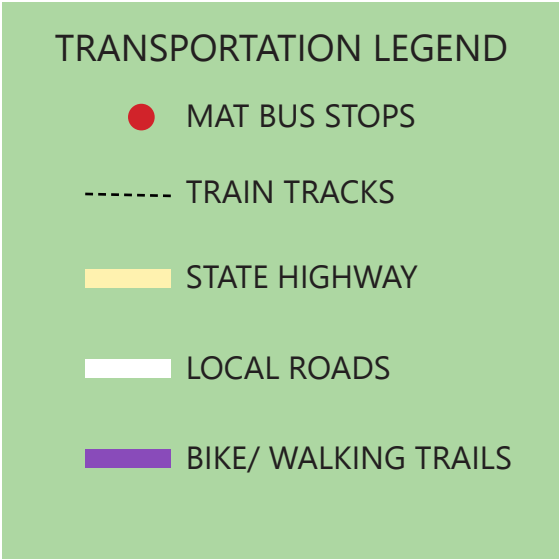
VIEW LOOKING TO SOUTH SIDE OF THE SITE
FIGURES 68-69

CIRCULATION



FIGURES 70-71

Since this is an existing site, which offered lots of previous amenities to the city of Moorhead, many of the existing circulation patterns are already provided. Bus routes, roads, and walking paths are on the existing site and have been used for many years. For my project, the existing circulation paths will stay and some will be adjusted to meet the needs of the new project.



CIRCULATION

COVERED MAT BUS STOPS

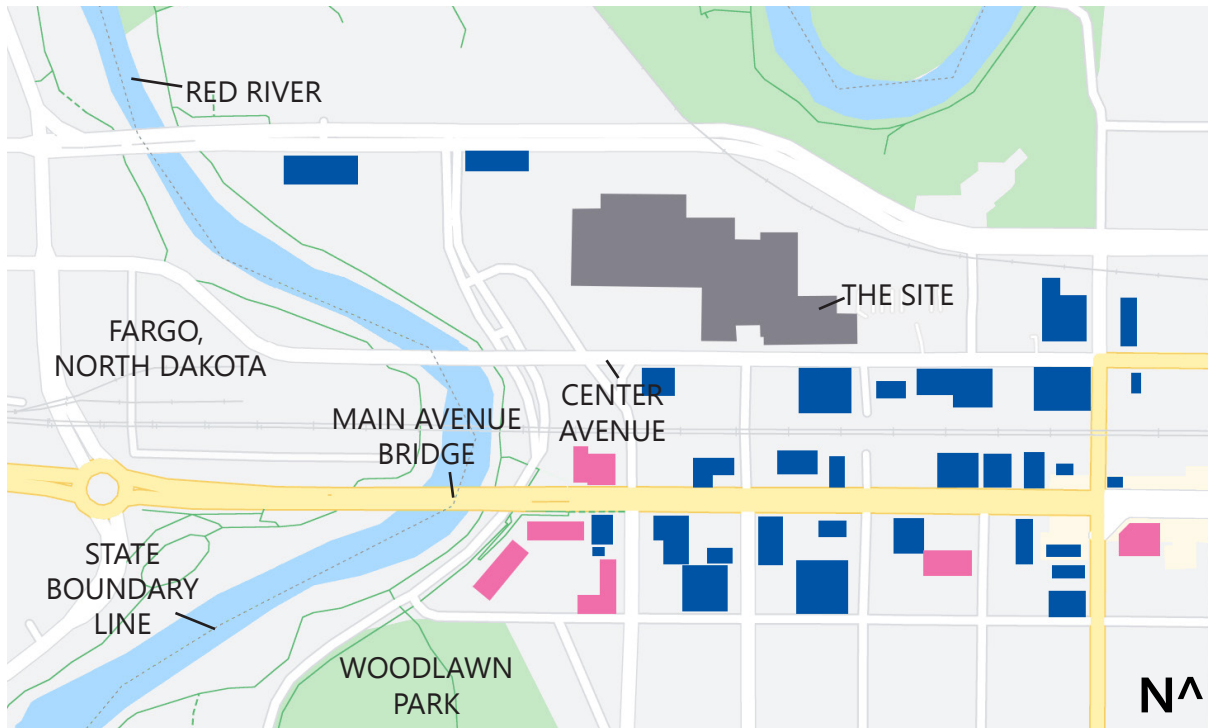


EXISTING PARKING RAMP

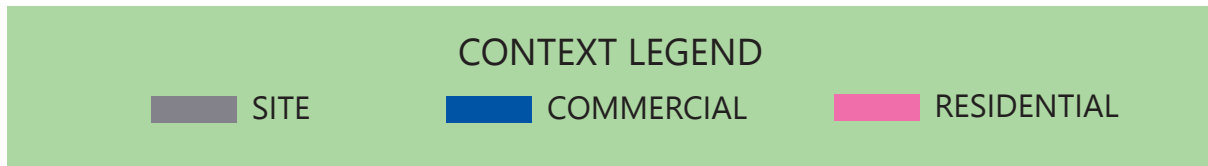


FIGURES 72-73

CONTEXT



FIGURES 74-75



My site is located in Downtown Moorhead which is dominated by commercial space. Throughout the downtown area, there are residential buildings, most infused with multi-use which includes residential and commercial. Downtown Moorhead is adjacent from downtown Fargo which also provides many commercial spaces with residential areas throughout downtown.

CONTEXT

MAIN AVENUE

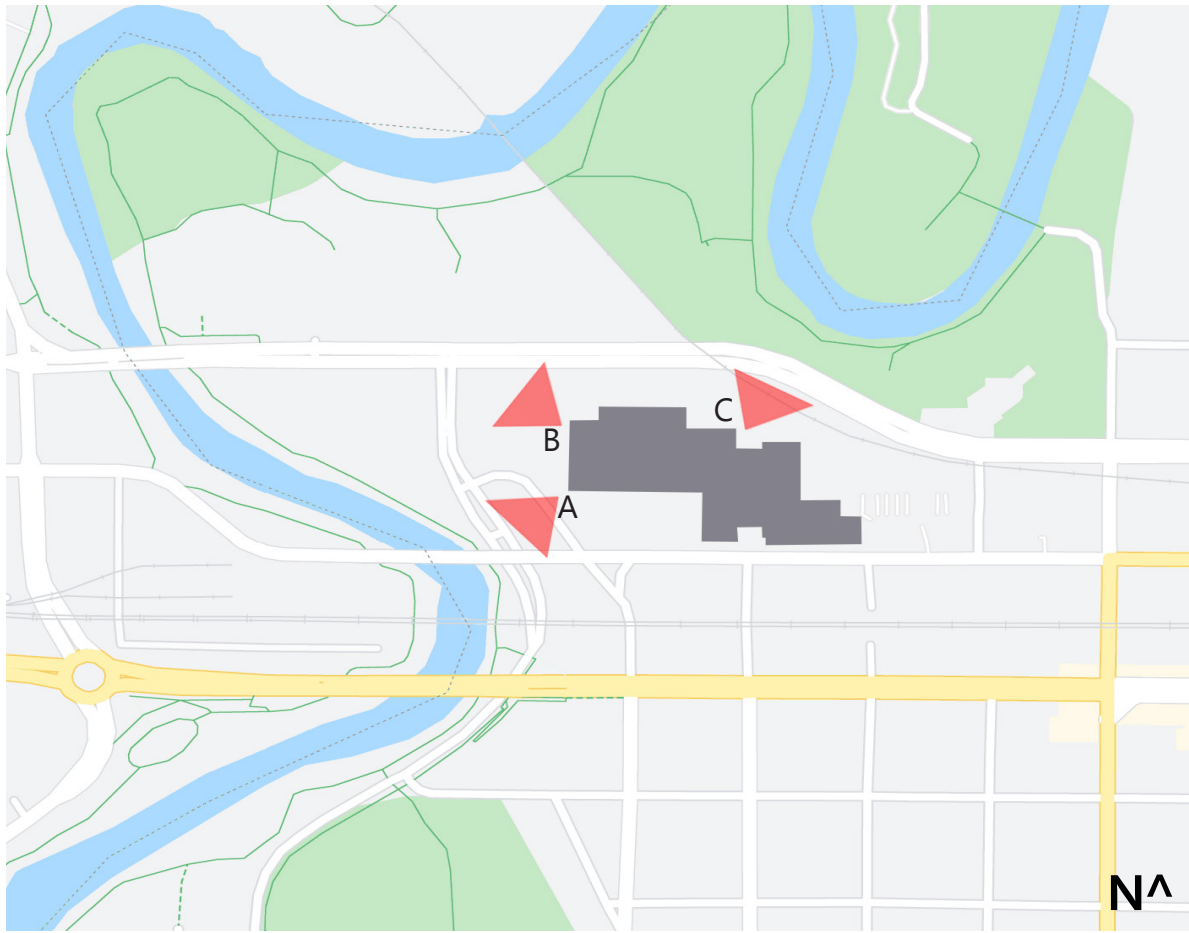


CENTER AVENUE



FIGURES 76-77

VIEWS



FIGURES 78-79

VIEW A | SOUTHWEST



VIEWS

VIEW B | NORTHWEST



VIEW C | NORTHEAST



FIGURES 80-81

EXISTING INTERIOR



FIGURES 82-84

EXISTING INTERIOR



FIGURES 85-87

TOPOGRAPHY

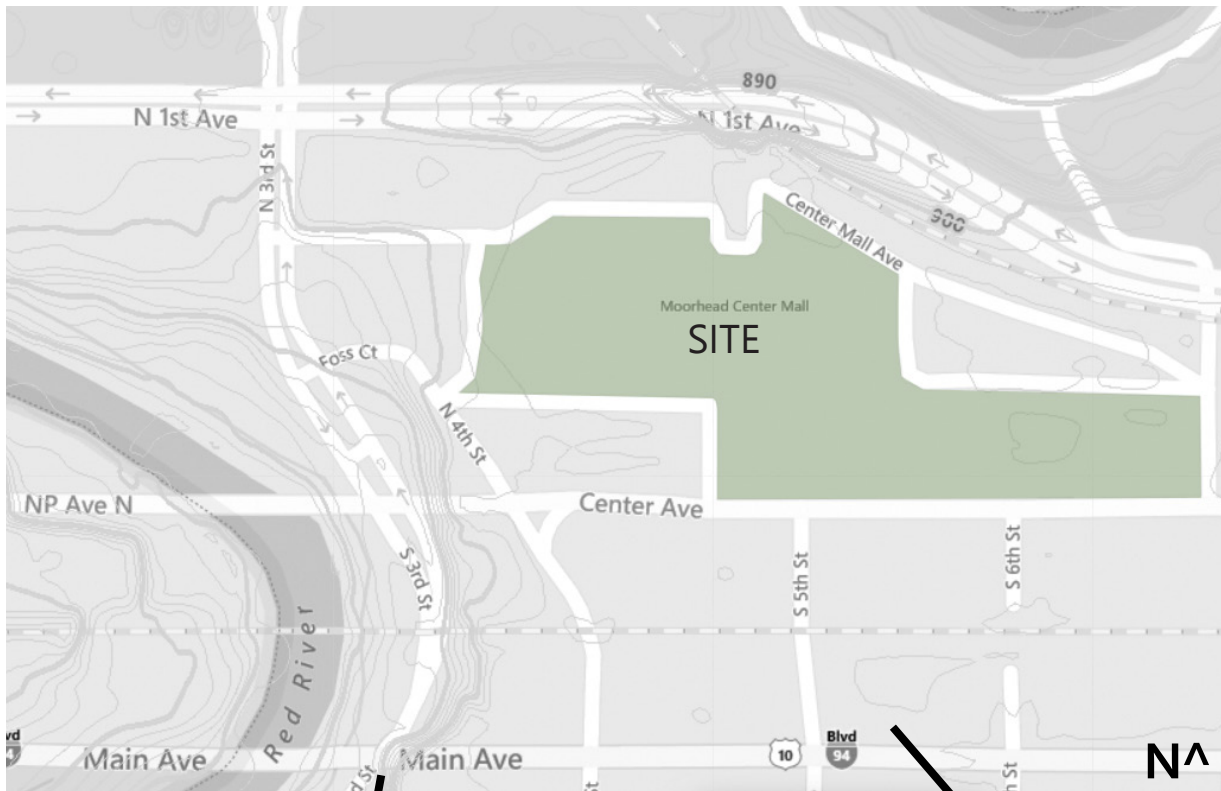


FIGURE 88

ELEVATION DECLINE TO RIVER LEVEL

FLAT AREA

The topographic map above displays the site highlight in green. The existing site is above the river level. Towards the river, the elevation has a great decline to the level of the river. For my project, it is going to be important to consider the elevation around the existing building due to the great chance for flooding during spring in the Fargo-Moorhead area. With experience of previous larger floods, the area is more prepared for these situations. The Fargo-Moorhead area is also very well known for being very flat land. Little to no elevation change in the city besides anything near the river.

SOILS

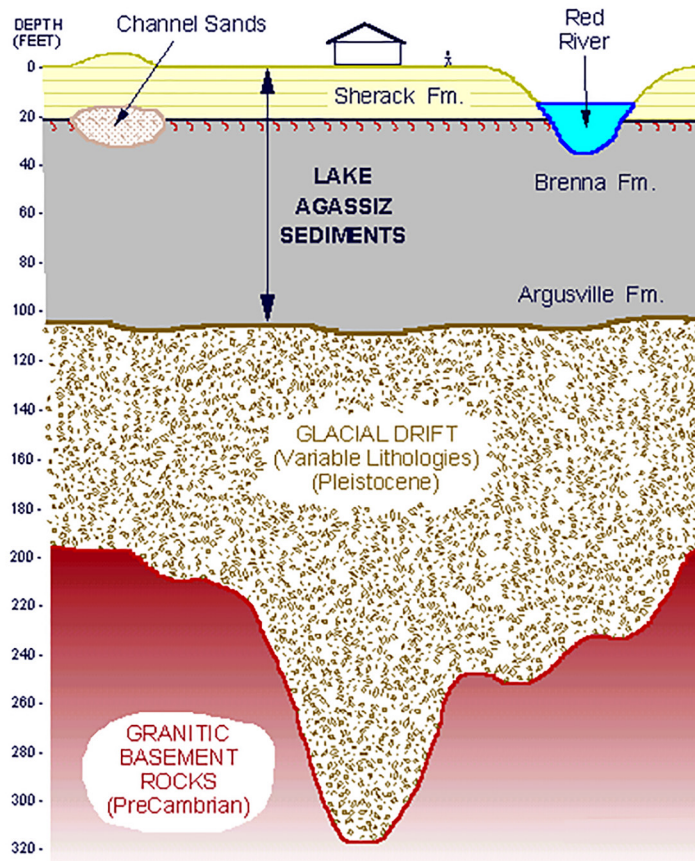


FIGURE 89

For about 85' below ground level, clays deposited from Lake Agassiz sits below the Fargo- Moorhead area. Below this clay sits basement rock of 100-200 feet of glacial sediments that were most likely deposited during the last ice age. This base rock provides structure for large structures such as high rises, bridges and water towers. The piles and concrete piers are able to rest on top of the glacial sediments which results in the needs for less structure for the large buildings. The picture above displays the soils in the area and is taken from the North Dakota State University Geology page.

CLIENT DATA

CLIENT INFORMATION

Client data provides information on the daily routine of a variety of ages. A selected age group was asked to record their daily activities for a week straight. The six people are aged from 55-87 years old. Aging can be affected by personal occupation, such as labor intensive jobs which can hurt a person later in life. Persons one, four, five and six still reside independently at their home while persons two and three live in independent and assisted living homes. The personal information can be found below to establish a background on each person with the daily activities on the next few pages.

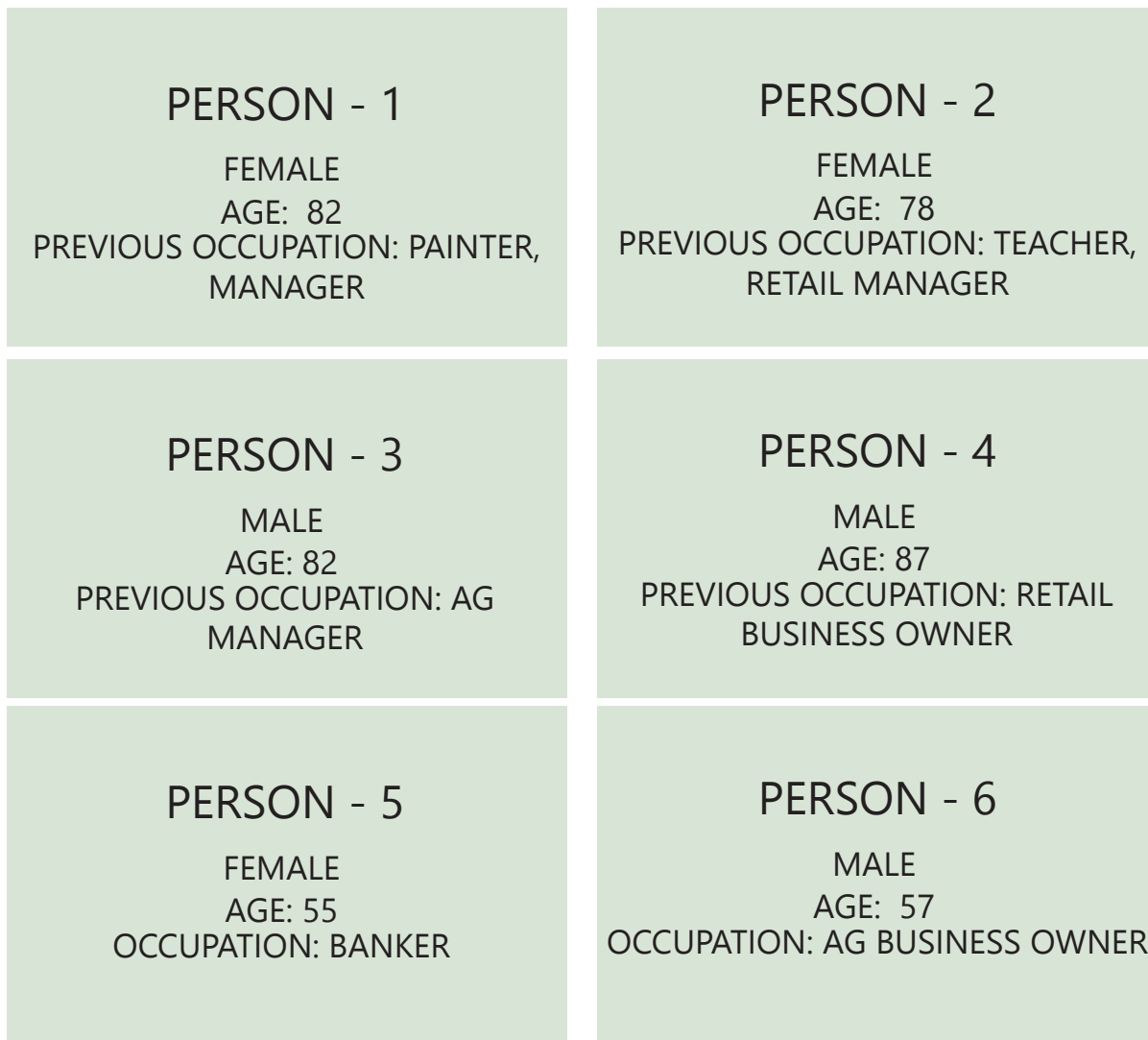


FIGURE 90

CLIENT DATA

PERSON - 1

①

Sunday Walked 2 miles
 7:PM Showered & eat Breakfast
 Clean Kitchen & made up bed
 11:00 Listened to Pastor Lee on the Radio
 12:00 Dinner for home and I.
 1:30 Started decorating our Christmas tree - and inside of our home.
 Watch a football game
 6:00 made supper
 7:00 watch the wheel of fortune
 9:00 9 o'clock local news
 10:00 Shower & Bedtime

Monday: Walked 2 miles
 7:AM Shower & made breakfast for home & I
 10:00 Finish with decorating
 12:00 dinner
 4:00 Read the paper
 5:00 Watched the local news
 6:00 made supper
 7:00 watch wheel fortune
 Played "die" card game w/home
 9:00 watched news & cleaned up for bed
 10:00 Bedtime

②

Tuesday
 7:AM walked 2 miles
 Showered
 Made Breakfast for home & I.
 9:00 washed clothes & Ironed
 Vacuum front room & 2 Bedrooms
 Clean Hardwood floors in Kitchen
 Hallway & Bathroom.
 12:00 Made dinner & Clean up kitchen
 1:00 hair cut
 2:00 Watched Xmas Special ant.V
 5:00 played the card game "die"
 6:00 Supper
 7:00 watched wheel of fortune
 8:00 Read Grand Forks Herald
 9:00 Watched the news
 10:00 Bedtime

Wed. 7PM - Walked 2 miles
 8:00 Showered
 9:00 made Breakfast & Clean Kitchen
 10:00 Got groceries
 12:00 made dinner

③

Wed
 1:00 took a short nap
 2:00 Exercise
 3:00 read a book
 5:00 started our supper
 6:00 Supper time
 7:00 watched wheel of fortune
 8:00 played cards (die)
 Made a Salad & got squash for Thanksgiving
 9:00 watched the local news
 10:00 Bedtime & Showered - something I read before Bedtime

Thurs - walked 2 miles
 7:AM Showered 8 o'clock - watched the
 9:00 Breakfast - Thanksgiving Parade
 10:00 We talked to our children & wished them a Happy Thanksgiving Day - we surely missed them
 4:00 Our daughter in law & husband cooked us Thanksgiving dinner
 It was delicious - they are such a blessing to us -
 9:00 Watch the news
 10:00 We said prayer went to bed. *God is good thankful for each day!*

④

Friday
 7AM walked 2 miles
 Showered
 9:30 eat breakfast w/home
 Bed-made & Vacuum Carpet
 10:30 Made Carnal Candy (for Christmas)
 12:00 Dinner - (left overs from Thanksgiving Day)
 1:00 made Xmas card list to send & all address
 6:00 Very nice Xmas Parade included 20 floats
 Included horses & fireworks
 7:30 ate supper - Read Grand Forks Herald
 8:00 - news & 10:00 o'clock Bedtime

Sat. 7AM walked 2 miles
 8:00 vacuum carpets & washed sheets & made bed
 10:00 made apple pie
 12:00 made chili for dinner
 1:00 peeled apples & froze for pie & apple crisp
 3:00 worked on my Xmas Card -
 5:00 took to a friend
 6:00 Eat supper - & after played cards (go!)
 9:00 Watched the news
 10:00 Bedtime -
 Bertie Reed

FIGURES 91

CLIENT DATA

PERSON - 2 | 'GRANDMA'

PERSON -3 | 'GRANDPA'

Tues. 24 Grandma Grandma

AM 7 Awake	PM
7:30 Breakfast - Holiday Music	1:00 Laundry
8:00 Make bed - Morning prayers	2:00 Phone - Friends
8:30 Wash clothes	2:30 Holiday decorations
9:00 Personal Hygiene	3:00 Listen/Speak
9:30 Fitness Center	3:30 Dinner preparation
10:00 Morning coffee	5:30 Dinner
10:15 Holiday decorating	6:30 Cleanup Kitchen
11:00 Donuts/worship	7:30 Hallmark Xmas Movie
11:30 Visit friends	9:30 Evening Prayers
12:00 Lunch	10:00 Bedtime

Tues. 24 Grandpa Grandpa

AM 7:00 Awake	PM
7:30 Breakfast	1:00 - TV
8:00 Make bed - Morning prayers	1:30 - 3:00 Adult coloring
8:30 Personal Hygiene	3:15 - Mail
9:00 Tidy bathroom	4:00 Assist dinner
9:30 Fitness Center	5:00 Set table
10:00 Morning coffee	5:30 Dinner
10:30 Vacuum	6:30 Cleanup Kitchen
11:00 Bookwork	7:30 Hallmark Movie
11:30 Visit friends	9:30 Evening Prayers
12:00 Lunch	10:00 Bedtime

58-64

Wed 25 Grandma Grandma

AM 7:00 Awake	PM
7:30 Breakfast - News	1:00 - Read
8:00 Make bed - Morning prayers	2:00 - Phone calls
8:30 Bake - Crescent rolls	3:00 - Mid-afternoon coffee
9:00 Personal hygiene	3:30 Janette brought goodies
9:30 Holiday decorating	4:00 More decorating
10:30 Pre-holiday - friend phone calls	5:00 Dinner cooking
11:30 Lunch preparations	6:00 Dinner
12:00 Lunch	6:30 Kitchen cleanup
	7:00 family called
	8:00 TV
	8:30 Shower
	9:00 Night prayers
	9:30 Bed

Wed 25 Grandpa Grandpa

AM 7:00 Awake	PM -
7:30 Breakfast - News	1:00 - TV
8:00 Make bed - Morning prayers	1:30 - 3:00 Adult coloring
8:30 Personal hygiene	3:15 - Mail
9:00 Tidy bathroom	3:45 - 4:30 Phone - Friends
9:30 Assisting dec.	4:30 - TV
10:00 Morning coffee	5:00 News
10:30 Dump garbage	5:30 - Dinner
11:00 Set table	6:00 - fill dishwasher
12:00 Lunch	6:30 - 7:00 TV. Pawshes show
	7:00 - Worked - office
	7:30 - 9:00 TV
	9:00 Night prayers
	9:30 Shower

Thurs 26 Grandma Grandpa

AM 7:00 Awake - Turkey Day	PM 7:00 Awake Turkey Day
7:30 Breakfast	7:30 Breakfast
8:00 Make bed - Morning Prayers - thankful	8:00 Morning prayers thankful
8:30 Calls from dear family	8:30 Phone - family - yak
9:00 Personal Hygiene	9:00 Personal - Cleanup
9:30 Mid morning coffee	9:30 Mid-AM coffee
9:30 - 10:30 Phone calls - Xmas music	10:00 Make out garbage
11:00 Watch TV	10:30 - 11:30 TV
PM 12:00 Brent & Janette brought turkey dinner	11:30 - Set table
1:00 Clean kitchen mess	PM 12:00 - Enjoyed turkey feast
2:00 - 4:00 TV	1:00 Still eating - pie
4:00 - 6:00 Social gathering	1:30 Nap
6:00 Dinner	2:00 - 4:00 Social gathering
6:30 Cleanup	6:00 Dinner
7:00 - 9:00 TV	6:30 Cleanup
9:00 News	7:00 - 9:00 - TV
9:00 Shower	9:00 News
9:20 Prayers - Bedtime	9:15 Shower
	9:30 Nike prayer

Fri. 27 Grandma Grandpa

AM 7:00 Awake -	AM 7:00 Awake
7:30 Light breakfast	7:30 Light breakfast
8:00 Make bed - Morning prayers	8:00 Lights up house
8:30 Clean fridge	- Xmas lights - music
9:00 Phone calls	8:30 - Calls - Vt
9:30 Xmas Music	9:00 - Vacuum
9:30 - 10:30 Xmas decorating	9:30 personal hygiene
11:00 Lunch preparation	10:00 Mailed letters
11:30 Do Laundry	10:20 Visited Friends
12:00 Lunch	11:00 put Xmas kits away
12:30 Cleanup	PM 12:00 lunch
PM 1:00 Read	12:30 Cleanup kitchen
2:00 - 4:00 Addressed holiday cards	1:00 - 3:00 Adult coloring
4:30 Dinner preparations	3:00 Mid-PM coffee
5:30 Dinner	3:30 Mail
6:30 Cleanup	4:00 clean files
Shower	5:00 Dinner Prep
7:30 - 9:30 TV - Hallmark Xmas Movie	6:00 Dinner
10:00 Bedtime prayers - zzz	6:30 Must to wheel of fortune
	7:00 Hallmark Movie
	7:00 Cleanup - Shower
	8:00 Evening prayers zzz

FIGURE 92

CLIENT DATA

PERSON - 2 | 'GRANDMA'

PERSON - 3 | 'GRANDPA'

Jan 28	Grandma	Grandpa
AM-7:30	Awoke	AM-7:30 Awoke
8:00	Breakfast	8:00 Breakfast
8:30	Baked carmel rolls	8:30 fill dish washer
9:00	Personal Hygiene	9:00 Personal Hygiene
10:00	Holiday Recipes - future baking	9:30 clean bathroom
11:00	Janelle with groceries & goodies	10:30 Vacuum
11:00	Mid morning coffee/sals	11:00 Mid AM coffee
11:30	Major Xmas decorating	11:30 Assist decorating
PM 12:00	Skung more pictures, etc	PM 12:00 Hang pictures
1:00	Completion Holiday Trim	1:00 Feel like Xmas
1:00	My helper went home - rest time	1:30-3:00 Coloring
2:30	Phone calls	3:00 Watch Football
3:30	TV	5:00 Dinner prep
5:30	Dinner	5:30 Dinner
7:00	Shower	6:30 Shower
8:00	Evening Prayers	8:00 Evening prayers
9-11:00	Hallmark Movie	9-11:00 Hallmark Movie

Jan 28	Grandma	Grandpa
AM-7:00	Awoke	AM-7:00 Awoke
7:30	Breakfast	7:30 Breakfast
8:30	Bake Cake	8:00 Personal Hygiene
9:30	Clean up kitchen	9:30 TV
10:00	TV - Church	10:00 TV Church
11:00	Lunch prep	11:00 Lunch prep
PM 12:00	Lunch	PM 12:00 Lunch
12:30	Foot ball game	12:30 Football game
1:00-2:00	Phone calls	3:30 Phone call
2:00	Made meatballs	4:30 Mail & NKA
3:00	TV	5:00 Dinner
4:00	Dinner Prep	6:00 Cleanup
5:00	Dinner	7-9:00 - Hallmark movie
6:00	Cleanup	9:30 Shower
7:00-9:00	Hallmark Movie	10:00 Nike play cre
9:30	Shower	
10:00	Nike prayers ZL	

Mon 30	Grandma	Grandpa
PM 7:30	Awoke	AM 7:30 Awoke
8:00	Laundry	8:00 Breakfast
8:30	Breakfast	8:30 Personal Hygiene
9:00	Personal Hygiene	9:30 Fitness
9:00-10:30	Xmas Music - Xmas letters	10:30 Vacuum
11:00	Community Worship	11:00 Worship
PM 12:00	Lunch	PM 12:00 Lunch
1:30	Relax - reading	12:30-1:30 TV
3:00	Phone calls - family	1:30-3:00 - Adult Coloring
4:00	Dinner prep	3:30 Visit friend
5:00	Dinner	4:30 Mail
6:00	Cleanup kitchen	5:00 Dinner
7:00-9:00	Shower - Disney & CMA Xmas	6:00 Kitchen cleanup
9:30	Shower	7-9:00 TV
10:00	Evening prayers ZL	9:00 Shower
		10:00 Evening Prayer ZL

Tues. Dec 1	Grandma	Grandpa
AM 7:00	Awoke	AM 7:00 Awoke
8:00	Breakfast	8:00 Breakfast
8:30	Personal Hygiene	8:30 Personal Hygiene
9:30	Baked cookies	9:30 Assist with Kie
10:30	Cleaned up baking dishes	10:30 Vacuum
11:30	Prepare lunch	11:00 Dispose garbage
PM - 12:00	Lunch	11:00 Clean office
1:00	Relax - Xmas music	12:00 Lunch
2:00	Friends visited	1:00 TV
3:00	Phone call	2:00 Adult coloring
4:00	Snacking Mail	3:00 Adult coloring
4:30	TV	3:30 - Mail
5:00	Prep dinner	4:00 TV
6:00	Dinner	5:00 TV
7:00	Kitchen cleanup	5:00 News
8:00	TV	6:00 Dinner
9:00	TV	6:30 TV
9:30	Shower	9:00 TV
10:00	Evening prayers - ZL	9:00 Shower
		10:00 Evening prayer

FIGURE 93

CLIENT DATA

PERSON - 4

Sunday Rome Field (1)

6:00 AM - Got up and dressed for deer hunting & packed food for the day
6:45 AM - Left to go deer hunting
4:30 PM - Came home from deer hunting
5:00 PM - Took a hot shower
6:00 PM - ate supper
6:30 PM - Watched wheel of fortune on TV
7:00 PM - watched T.V.
9:00 PM - Got ready for bed & watched local news on TV

Monday

7:45 AM - Got up and took a shower
8:45 AM - Breakfast
9:15 AM - Took all my hunting items out of my pickup & packed away till next year.
12:00 PM - ate dinner
1:00 PM - Rested for one hour
2:00 PM - Started working on United Telephone managers wages for 2021 - Had to call all the directors
6:00 PM - ate supper
6:30 PM - Watched wheel of Fortune on T.V.
7:00 PM - Played Cards with Bertie
9:00 PM - Got ready for bed and watched the local news on T.V. in bed

Wednesday (3)

8:30 AM - Called each director on the United Telephone Co board & finalized the managers salary for 2021
11:15 AM - Went up town and picked a pumpkin pie for Thanksgiving - also stopped in at the hardware store - also stopped in at the Drug Store
12:00 PM - ate dinner
1:00 PM - Rested for 1 hour
2:00 PM - worked in my office as I had a lot of things to do.
5:00 PM - Read the Grand Forks Herald
6:00 PM - ate supper
6:30 PM - Watched Wheel of Fortune on T.V.
7:00 PM - watched T.V.
8:00 PM - Played Cards with Bertie
9:00 PM - Got ready for bed and watched the local news on T.V. in bed

Thursday

7:30 AM - Got up and took a shower
8:00 AM - ate Breakfast
8:30 AM - Worked in ^{out} basement & walked on tread mill

Tuesday (2)

7:00 AM - Got out of bed and took a shower
7:45 AM - Took my pickup to Christie Motors for a service job.
8:00 AM - ate breakfast
9:00 AM - Conference call to United Telephone Co. Jim president and I chaired our Nov meeting over the telephone
12:00 PM - ate dinner
1:00 PM - Rested for 1 hour
2:00 PM - Went to Christie Motors to get my pickup
2:30 PM - I called each director on United Telephone Co's board and talked about the managers salary for 2021
5:00 PM - Played Cards with Bertie
6:00 PM - ate supper
6:30 PM - watched wheel of Fortune on TV.
7:00 PM - watched T.V.
9:00 PM - Got ready for bed and ~~was~~ watched the local news on T.V. in bed

Wednesday

7:30 AM - Got out of bed and took a shower
8:00 AM - Breakfast

Thursday

9:00 AM - Watched the Thanksgiving parade on TV.
10:00 AM - Talked to our kids by phone.
11:00 AM - watched more of the parade
12:00 PM - Had a few light lunch.
1:00 PM - Watched Football on T.V.
4:00 PM - Tara delivered a Thanksgiving meal to us and it was real good
6:00 PM - watched more TV.
7:00 PM - Played Cards with Bertie
9:00 PM - Got ready for bed and watched the local news on T.V.

Friday

7:30 AM - Got up and took a shower
8:15 AM - Breakfast
9:00 AM - Worked in my office
12:00 PM - ate dinner
1:00 PM - Rest for 1 hour
2:00 PM - Picked up and took care of the mail
3:00 PM - Trip to the Hardware store
4:00 PM - Filled my pickup with gas
4:30 PM - worked in office
5:00 PM - watched the local news on T.V.

CLIENT DATA

PERSON - 5

Sunday	6:30am Wake up & Coffee 7:00 am Laundry 10:00 am brunch 12-4 pm Work around House, Help Logan with homework 5:00 pm Make dinner 9:00 pm Bed time
Monday	5:00 am Wake up, Coffee, Laundry 6:00 am Get ready for Work 7:15 am Leave for work 8:00 am – 5:00 pm Work 6:00 pm Make Dinner 7:00 pm Help Logan with Homework 9:30 pm Watch tv in Bed
Tuesday	5:00 am Wake up, Coffee, Laundry 6:00 am Get ready for Work 7:15 am Leave for work 8:00 am – 5:00 pm Work 6:15 pm Leave for Hockey game 7:00 pm Logan’s Hockey game 10:00 pm Time for bed
Wednesday	5:00 am Wake up, Coffee, Laundry 6:00 am Get ready for Work 7:15 am Leave for work 8:00 am – 5:00 pm Work 5:30 pm Home from Work 6:00 pm Make Dinner 7:00 pm Watch Tv 9:00 pm Time for Bed
Thursday	5:00 am Wake up, Coffee, Laundry 6:00 am Get ready for Work 7:15 am Leave for work 8:00 am – 5:00 pm Work 5:45 pm Leave for Grand Forks 7:00 pm Logan’s Hockey Game 9:00 pm Return home from Grand Forks 10:30 pm Bedtime
Friday	5:00 am Wake up, Coffee, Laundry 6:00 am Get ready for Work 7:15 am Leave for work 8:00 am – 5:00 pm Work 6:00 pm Make Dinner 7:00 pm Relax 9:30 pm Time for Bed
Saturday	6:00 am Wake up, Coffee 8:00 am Prepare for coming week, watch tv 10:00 am Run errands 5:00 pm Make Dinner

FIGURE 95

CLIENT DATA

PERSON - 6

Sunday	6:00am Wake up & Coffee 7:00 am Laundry 10:00 am brunch 12-4 pm Work 5:00 pm Dinner 11:00 pm Bed time
Monday	5:00 am Wake up 6:00 am Leave for Work 6:30 am – 6:00 pm Work 6:30 pm Dinner 7:00 pm Pay Bills 10:30 pm Bedtime
Tuesday	5:30 am Wake up 7:00 am Leave for Work 7:00 am – 6:00 pm Work 6:15 pm Leave for Hockey game 7:00 pm Logan’s Hockey game 10:00 pm Time for bed
Wednesday	5:00 am Wake up 6:00 am Leave to Travel for Work 7:15 am Leave for work 8:00 am – 7:00 pm Work 7:00 pm Prepare for tomorrow 10:00 pm Time for Bed
Thursday	5:00 am Wake up 6:15 am Cycling 7:30 am Leave for work 8:00 am – 5:00 pm Work 5:45 pm Leave for Grand Forks 7:00 pm Logan’s Hockey Game 9:00 pm Return home from Grand Forks 10:30 pm Bedtime
Friday	5:00 am Wake up 6:00 am Get ready for Work 6:30 am Leave for work 8:00 am – 5:00 pm Work 6:00 pm Out to eat 9:30 pm Time for Bed
Saturday	6:00 am Wake up, 8:00 am Cycling Class 10:00 am Work at Shop 5:00 pm Travel to Grand Forks, Hockey game 11:00 pm Return to Fargo, Bedtime

FIGURE 96

CLIENT DATA

S U M M A R Y

This experiment of looking at daily activities provided an interesting outlook on the aging process. Each person interviewed through daily activities had a pretty active lifestyle considering the age. The younger persons were more occupation intensive with most of their day spent working followed by at home chores or activities. Some days and evenings were filled with activities for their children while those the older representatives were not as involved with their grandchildren on the daily but filled their time socializing with friends. I thought it was interesting to see the hours of time spent in the kitchen for the older generation compared to the younger ones who recorded their time. Person five spent significant less time in the kitchen compared to persons one and two. While persons six and one spent the most time exercising in the entire group.

These small patterns help determine some important characteristics that are needed in a senior living facility to reach all types of lifestyles and needs. This exercise was beneficial in putting myself into the shoes of someone retired or deep into their career. The information from this client research piece will reflect through the rest of my project.

PERFORMANCE CRITERIA

SPACE ALLOCATION

The space for this building is going to be very important for those experiencing the building. The users of this type of building are going to be full time residents who live in the space. The needs of the users are going to be important to consider a variety of lifestyles and daily activities to ensure all activities and needs are included. Size requirements for the variety of uses will need to be considered for each use. The number of users that will generally use the space and the times will affect the layout and design as well. The important spaces for the users will be found be studies taken from those already living in a facility and their daily habits. Case studies and literature sources have also shown the valuable spaces and sizes to include to ensure social interaction and healthy habits.

BEHAVIORAL PERFORMANCE

Behavioral patterns of users for the building have been taken from studies done on residents in an existing building. The usage patterns are important to consider the way the building is used and how it affects the residents. Two groups of different living styles have been asked to document their daily activities for a week to help determine the variety of patterns among the seniors. The usage patterns will also be affected by the lifestyles of each individual which can create a challenge for design. The health of the residents and users of the building is affected by the usage pattern and their daily activities. Sources to assist in patterns by the users will come from literature reviews which describe the effects of patterns in the living environment.

PERFORMANCE CRITERIA

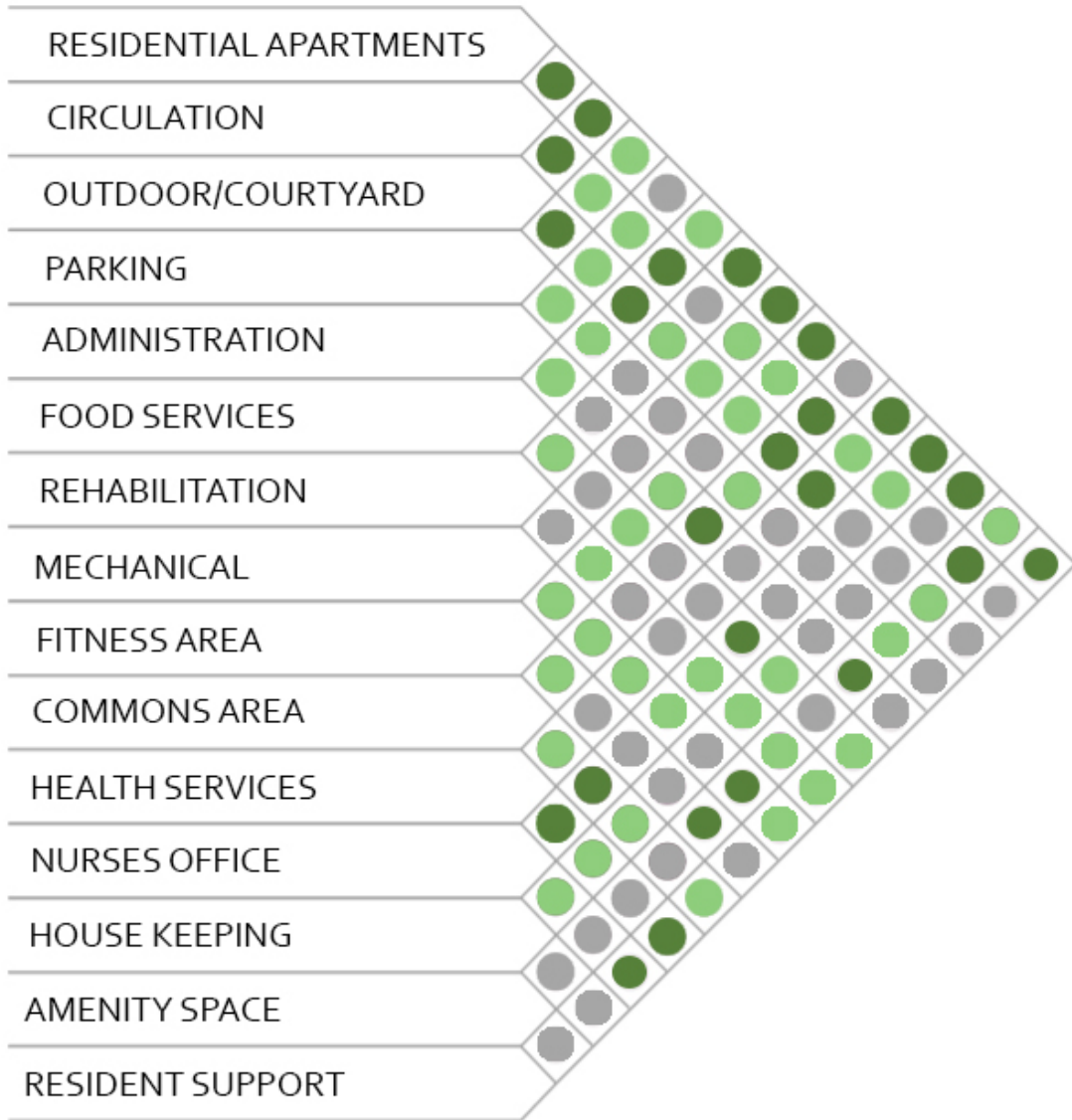
CODE COMPLIANCE

Code Compliance is an aspect of design that should always be considered. During the design and layout of this building, ADA will be taken into consideration to reach all the needs of ADA. It is important to address the existing structure and ensure it meets the update requirements of ADA. If not, the existing structure will be adjusted to meet the current specifications. Since this building will be for the older community, many of those are either in a wheelchair or have assistance while walking. Materials need to be considered for the code compliance as well. During some of my case studies, it said to consider the flooring material due to tripping hazards for those with walking assistance. Guidelines for ADA will be found through the Minnesota ADA requirements as well as following Minnesota building code for the rest of the design and building.

COST

The budget of this building will need to be considered due to being a residential project. The site has an existing building which offers a starting structure that could help with cost and budget. Depending on the existing conditions, the budget will need to be evaluated to better suit the work that will be done. A condition report can be done to better determine the start of the existing structure and the changes and adjustment that will need to be made for the project.

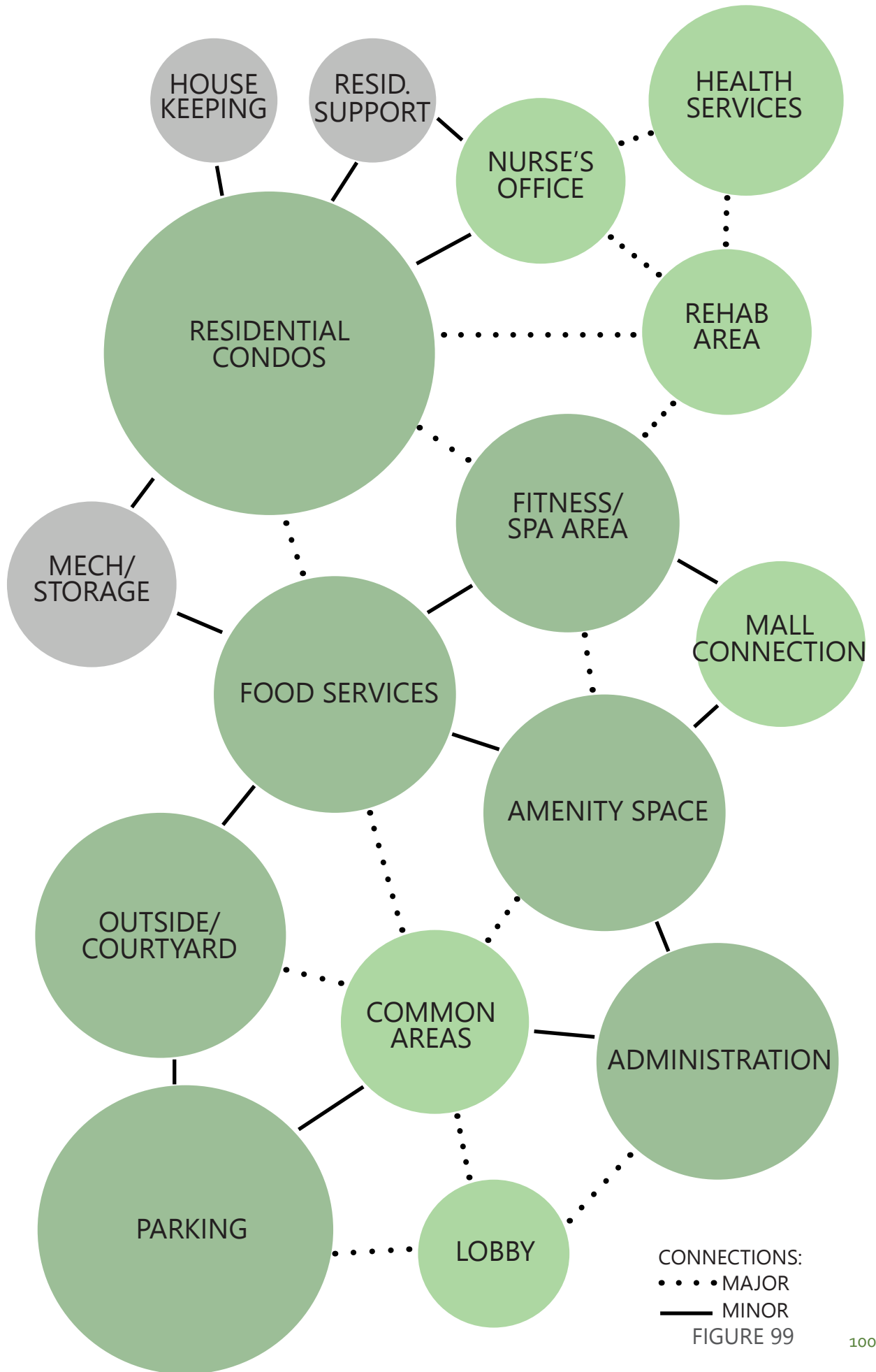
SPACE INTERACTION MATRIX



SPACE ALLOCATION TABLE

	SQUARE FOOTAGE (sq ft)	PERCENTAGE (%)
Resident Units (150)	160,500	65
Circulation	48,362	19
Administration	2,170	1
Food Services	4,710	2
Rehabilitation	1,360	0.5
Mechanical	4,000	1
Fitness Area	5,025	2
Commons Area	11,975	5
Health Services	2,500	1
Nurses Office	600	0.2
House Keeping	5,740	2
Resident Support	1,200	1.3
TOTAL	248,142	100%

SPACE INTERACTION NET

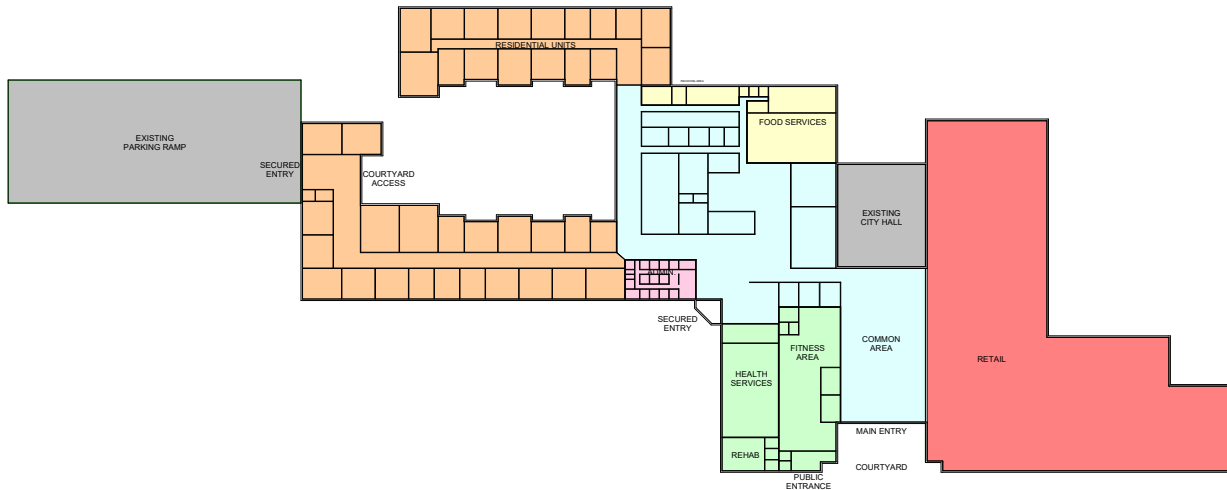


THESIS FINAL REVIEW

PROCESS DOCUMENTATION

1/30 | SCHEME PLANS

At the beginning phases of our project, we went through a variety of layout options for our projects. My three options are below displaying the different layouts. The first and second option have larger courtyards at the center for the residents to enjoy. While the third option has a courtyard, which opens to the public. Each option includes the same program for residents to see which would be best for the users.



OPTION 1

PROS:

- Connection with river on North side
- Open to public and residents (place for engagement)
- Large common space in the center of the building

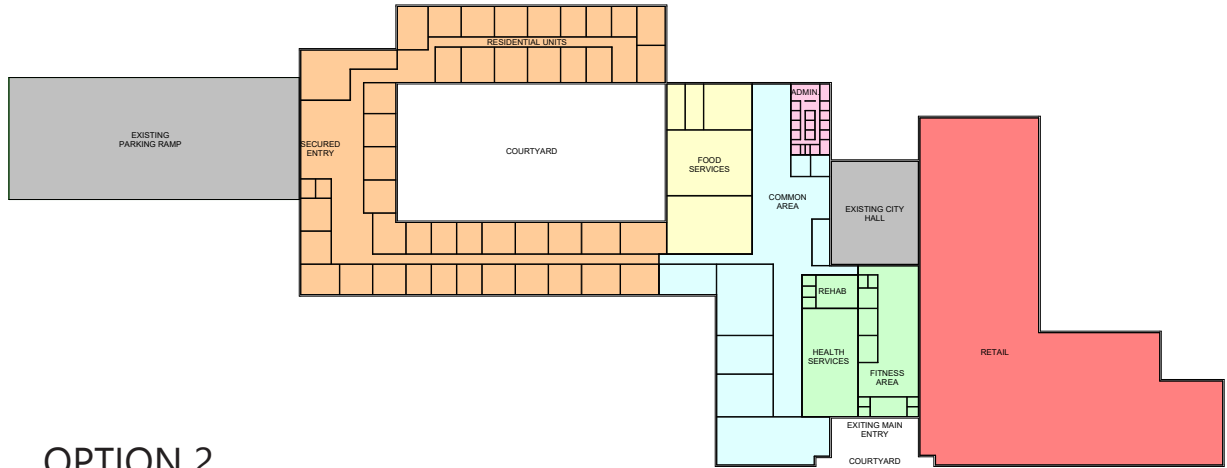
CONS:

- Lack of security with open courtyard
- Receiving area at City Hall entrance
- Lack of entire windows in large common space

THESIS FINAL REVIEW

PROCESS DOCUMENTATION

1/30 | SCHEME PLANS



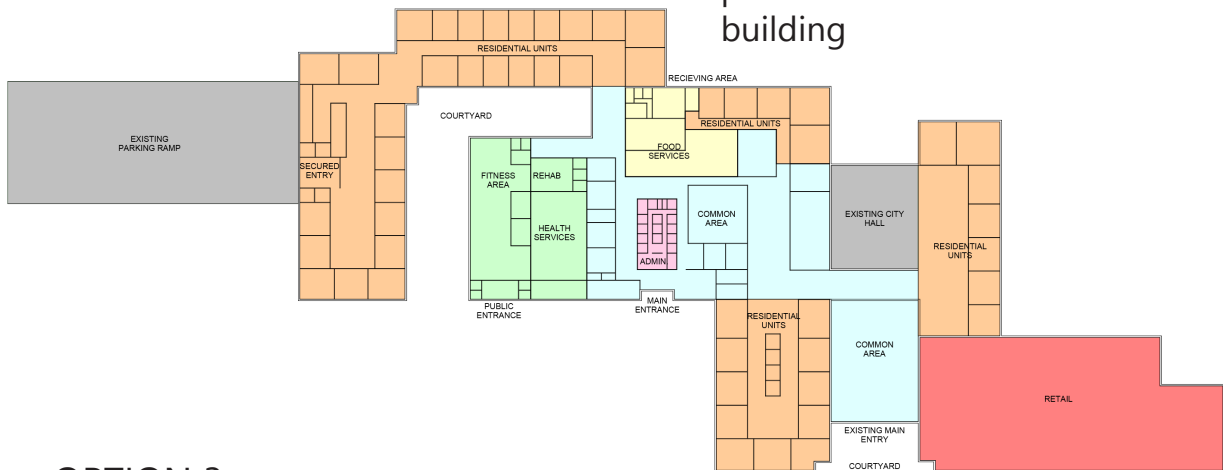
OPTION 2

PROS:

- Security in closed courtyard
- Easy access for users of fitness area
- Food services could be used as "center hub"

CONS:

- Lack of connection between retail and other areas
- Main access points to be adjusted
- More common space to provide more amenities to building



OPTION 3

PROS:

- 'Communities' of residential around building
- Views and easy access to health services
- Open courtyard for users of site

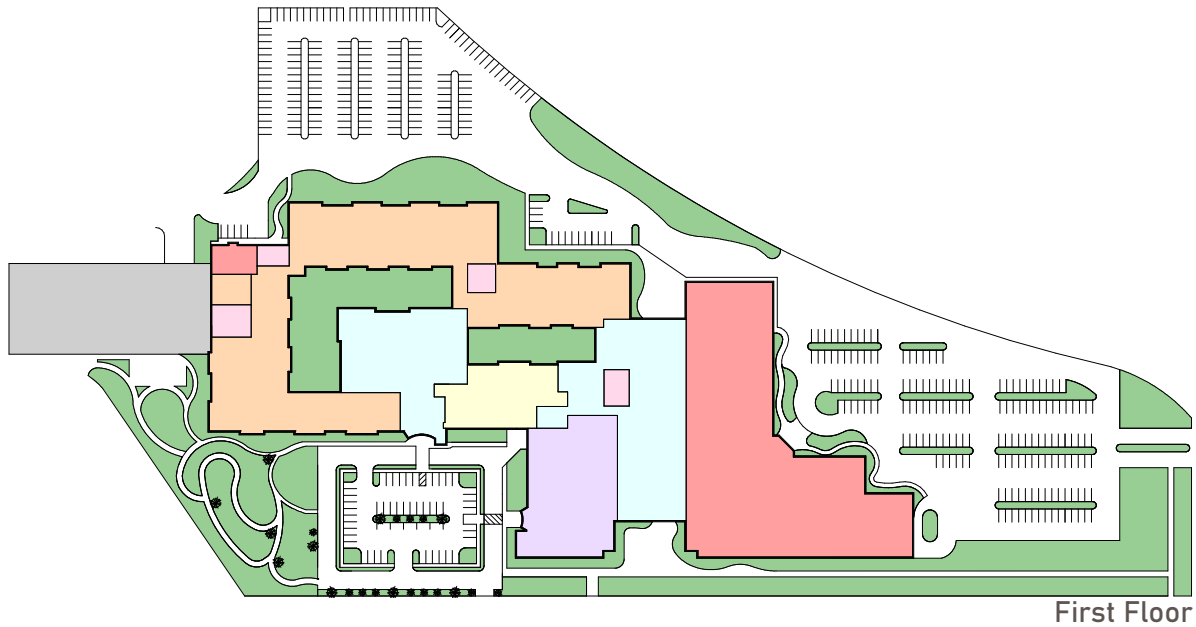
CONS:

- Smaller retail area
- Security and safety of building with open courtyard
- Potential disconnect between residents with different areas of living

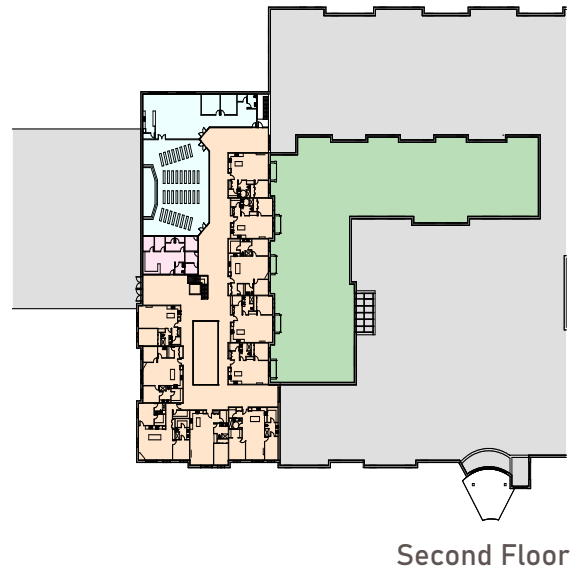
THESIS FINAL REVIEW

PROCESS DOCUMENTATION

03/08 | MID TERM REVIEWS



Our midterm reviews help provide feedback to our designs. By presenting our projects, I was able to receive ideas and advice to progress with the project. The program on the first floor was kept about the same with some rearranging of the plan. The second floor program was adjusted to better suit the users of the building. Overall, the midterm was very helpful to better my project.



THESIS FINAL REVIEW

PROCESS DOCUMENTATION

03/08 | MID TERM REVIEWS



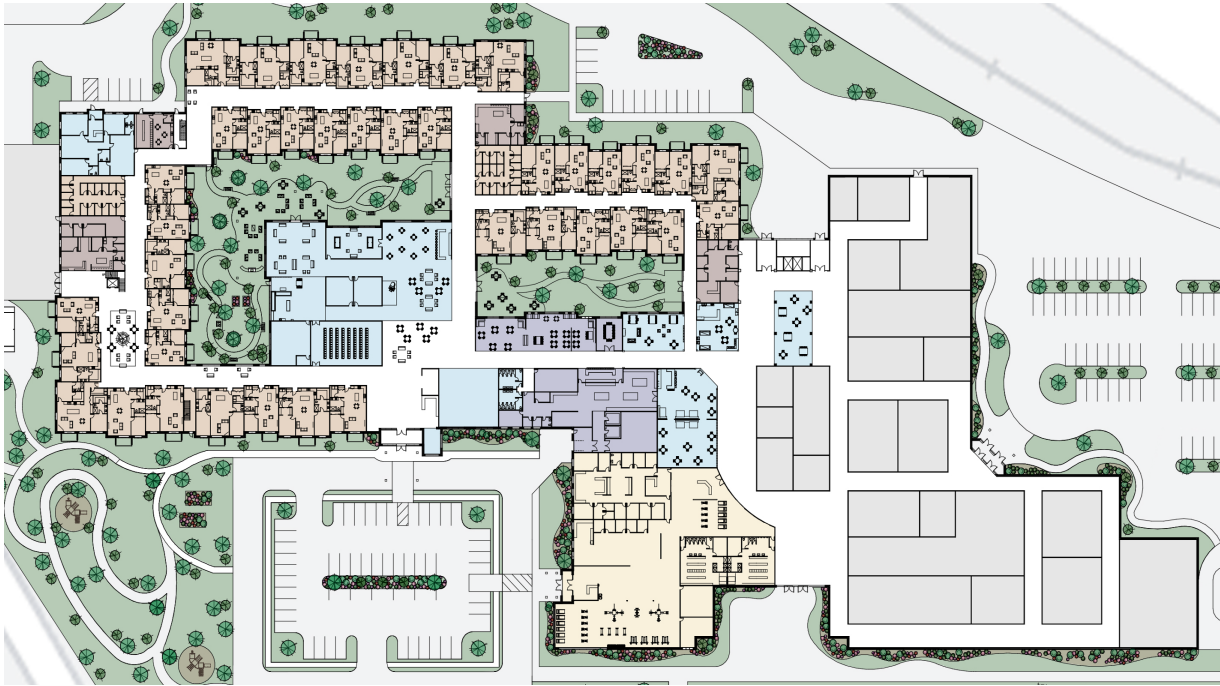
Courtyard Midterm Design



Entrance Midterm Design

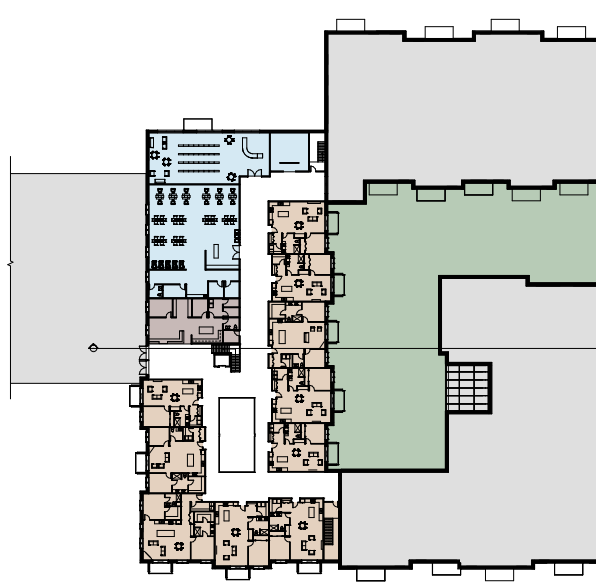
THESIS FINAL REVIEW

PROJECT SOLUTION DOCUMENTATION



First Floor

The large plan above is the first floor of the building. The plan is divided into larger categories to better understand the relationship of spaces in this large of a building. The building is over 237,000 square feet and offers a variety of amenities for users. The building also offers a small second floor which is located on the west side of the building where the former Herberger's department store was. The second floor offers a few residential units, common area and administration.

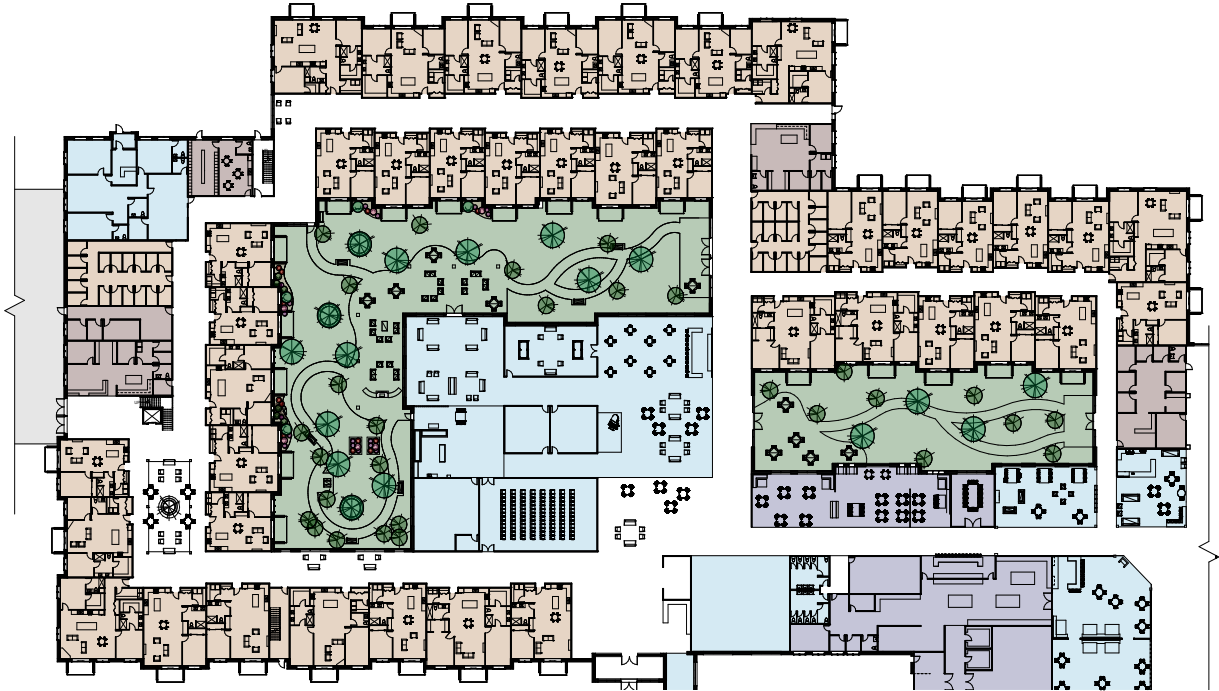


Second Floor

THESIS FINAL REVIEW

PROJECT SOLUTION DOCUMENTATION

RESIDENTIAL



Apartment

The residential portion of this mixed-use building can be found on the first and second floor. The building is home to 50 units ranging from one bedroom, one bedroom with a den and two bedrooms. Each room provides options for aging in place and design elements required for accessibility needs for the user.

THESIS FINAL REVIEW

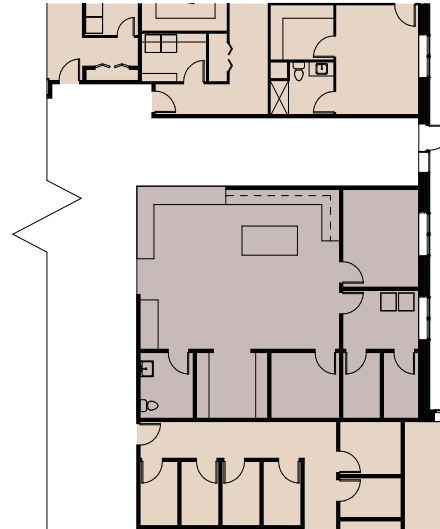
PROJECT SOLUTION DOCUMENTATION

ADMINISTRATION

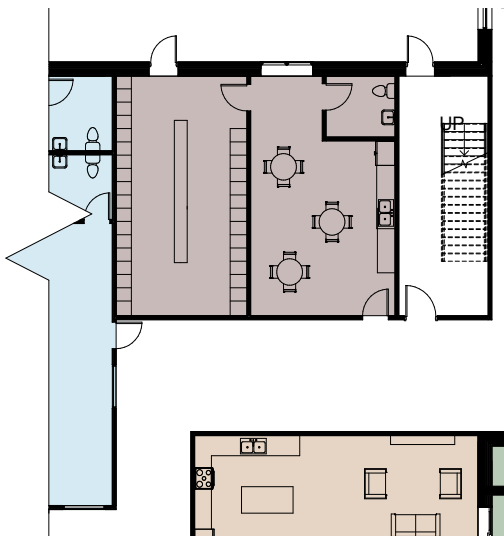
1) Main Administration



2) Nurse Station



3) Staff Area

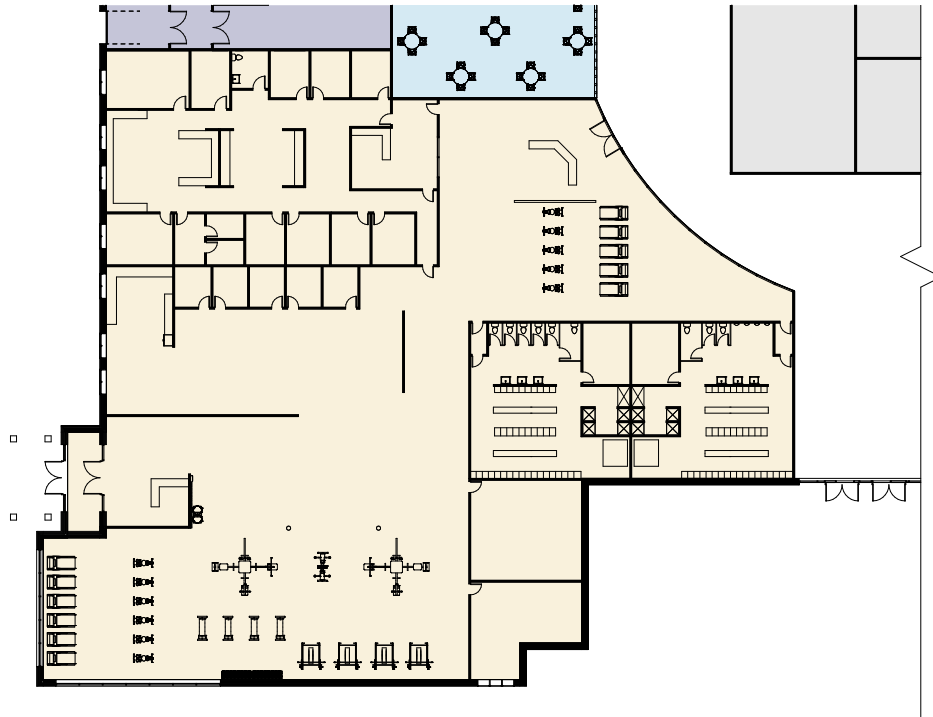


The administration of the building is broken into three categories. The main office is located near the center of the building. Offices, conference rooms and the main receptionist of the building is located here. The nurse station is the second category of the administration. There are two nurse stations on the first floor and one on the second floor. These provides access for the residents who need additional assistance as needed. The nurse station will be open 24 hours a day for all residents of the building. The third category of the administration is the staff area. The staff break room and lockers provide additional space for the staff to relax and store their belongs during shifts.

THESIS FINAL REVIEW

PROJECT SOLUTION DOCUMENTATION

HEALTH SERVICE



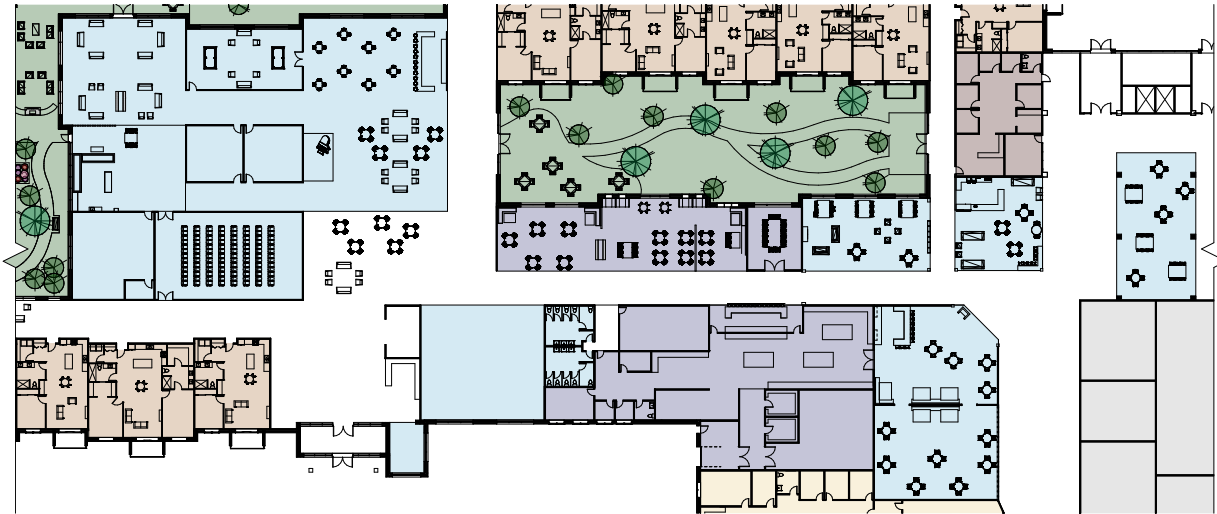
Wellness Center

The health area in the building provides services for the residents and the public. A small walk-in clinic, therapy area and fitness space provide a variety of amenities for the users. This area reaches one of the main goals of engagement allowing the residents to interact with the community. Having health services on site will also promote healthy living in all aspects of life.

THESIS FINAL REVIEW

PROJECT SOLUTION DOCUMENTATION

COMMON AREAS



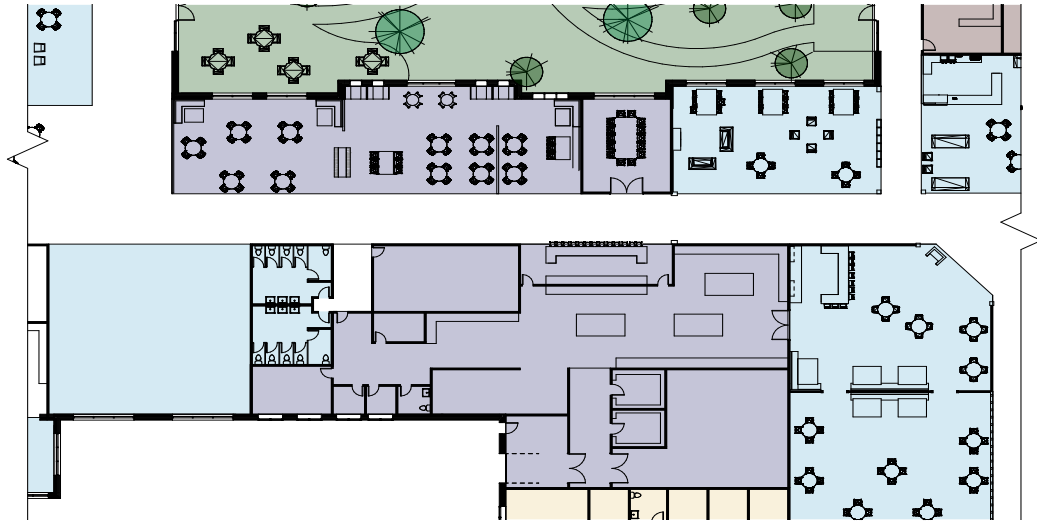
Interior Atrium

The common areas are broken up into two larger areas. Area one is nestled between both courtyards in the building and only open to the residents and their guests invited in. Within this space, there is plenty of room for community and social gatherings as well as hobbies such as gardening and crafts. Area two of the common space is open to residents and nonresidents. This larger space provides a flex area in the community for indoor farmers markets, craft shows or coffee hours. A coffee shop and restaurant are open for the community to enjoy and socialize together as one.

THESIS FINAL REVIEW

PROJECT SOLUTION DOCUMENTATION

FOOD SERVICES



Retail and Residential Connection

The main kitchen in the building feeds the residents and the public in the restaurant. Residents and nonresidents will have the opportunity to interact together within the food services. By supporting these opportunities for the community, the food services area reaches the goals of engagement, healthy living, and community.

THESIS FINAL REVIEW

PROJECT SOLUTION DOCUMENTATION

COURTYARD



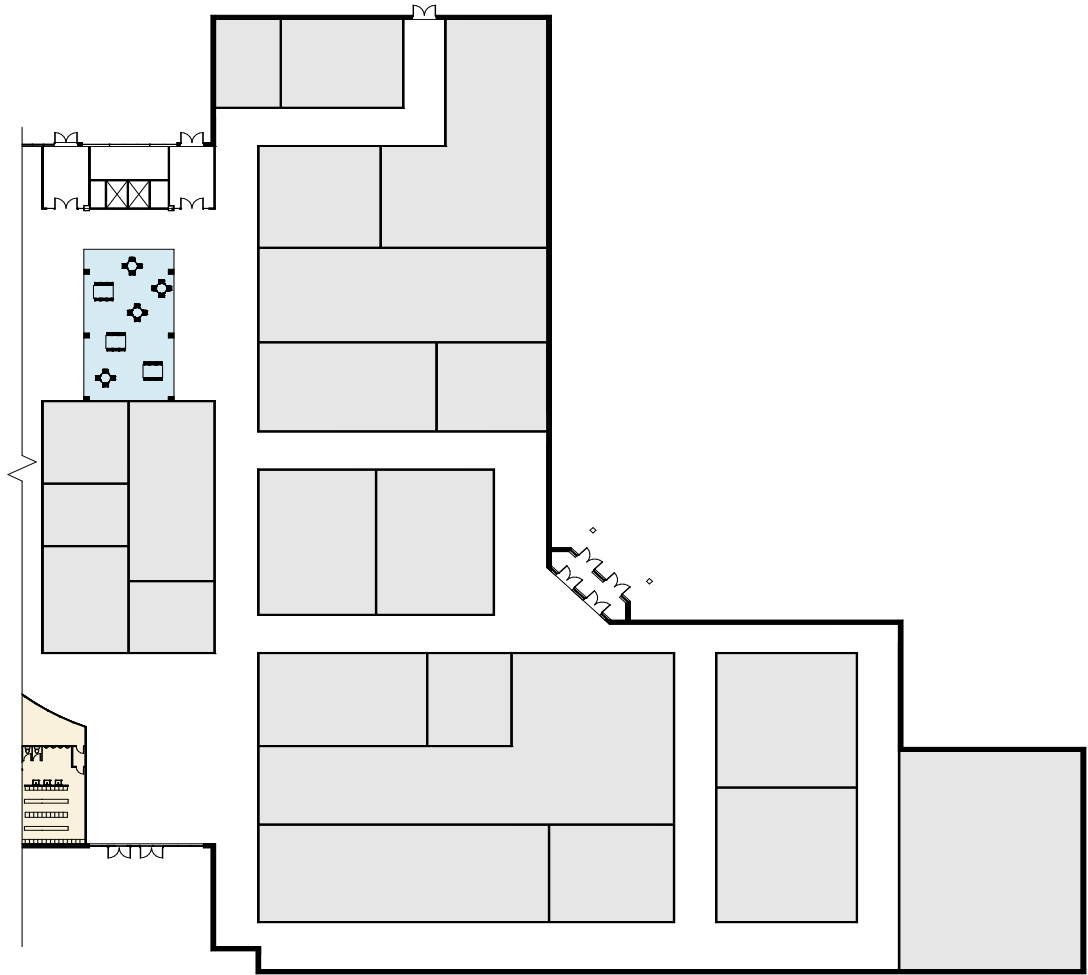
Courtyard

There are two courtyards at the center of building. Each offer walking paths, gardening and sitting areas. The courtyards provide green space for the residents to enjoy with privacy and security. Throughout the walking paths, benches are placed to encourage residents to use the walking paths with options to take breaks when needed. A variety of vegetation is found throughout courtyards to help bring nature into the building. Nature helps promote healing and calmness among the residents.

THESIS FINAL REVIEW

PROJECT SOLUTION DOCUMENTATION

RETAIL



The east wing of the building includes retail. The existing retail on this wing will stay in place to provide essential businesses for the residents and community. The city of Moorhead will benefit from the resources to bring additional people into the downtown area and provide a larger variety of retail to the area.

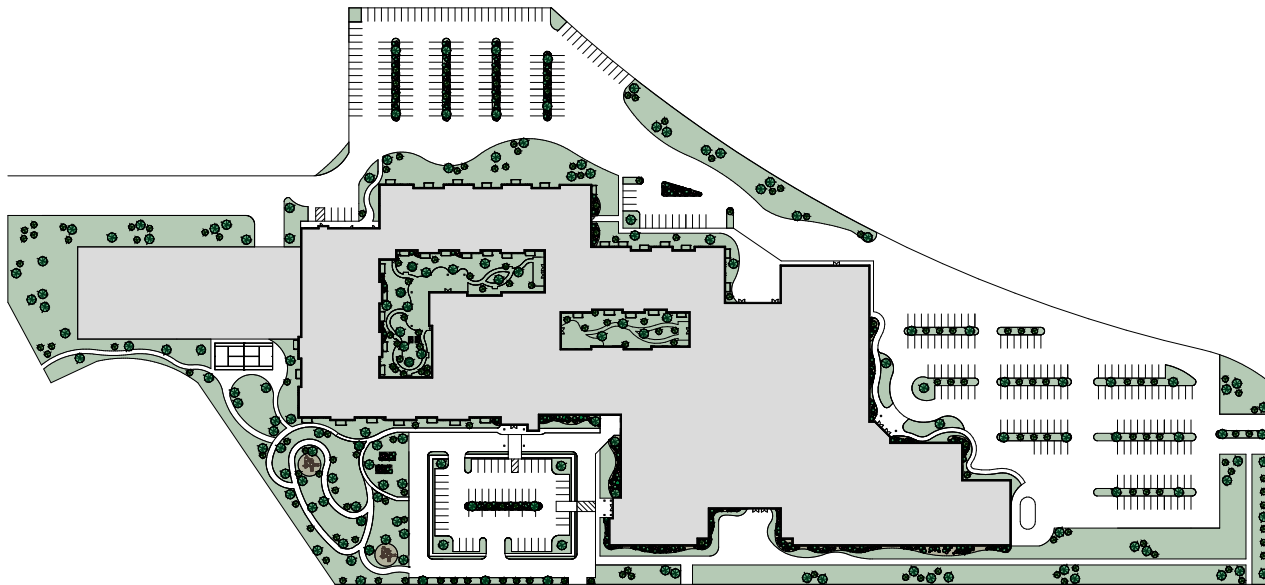
THESIS FINAL REVIEW

PROJECT SOLUTION DOCUMENTATION

EXISTING SITE



SITE SOLUTION



The picture at the top display the existing site and the original features. The proposed site, seen in the second picture, was redesigned to accommodate a variety of uses for the building. By adding additional vegetation, walking paths and community areas, the site will be more useful for residents and nonresidents. Including these features promotes activity on the site for all community members to enjoy.

THESIS FINAL REVIEW

PROJECT SOLUTION DOCUMENTATION

EXTERIOR BUILDING SOLUTION

The elevations below show the existing in comparison to the proposed design. The existing building lacked visual pleasure from the exterior. Around the building, store signs have been removed leaving an unpleasant image which turns the community away from the building. The proposed facades create a residential feel with a modern touch. The existing brick is carried throughout the rest of the building with metal panel accents.



EXISTING SOUTH ELEVATION



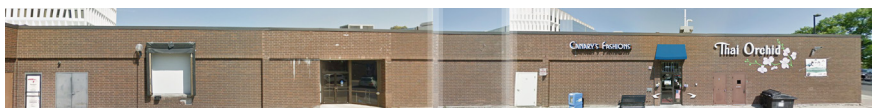
SOUTH ELEVATION



EXISTING NORTH ELEVATION



NORTH ELEVATION



EXISTING WEST ELEVATION



WEST ELEVATION

THESIS FINAL REVIEW

PROJECT SOLUTION DOCUMENTATION



Research helped provide essential information for designing a senior living community. As a young designer, I do not have the direct ability to put myself in the shoes of someone living in these communities and see their direct needs and wants. Through research, I was able to find out the essential needs to stay happy and healthy in a community setting. A case study from California, provided an example of reusing a mall to create a mixed-use area for seniors as well as the community. The success and research in the project lead to part of my inspiration for this project. To help assist and back my research, I was able to interview the daily schedules of elderly people of various ages and lifestyles. I had three different groups who participated in the documentation of daily routines. Each person was asked to document daily activities for a week, detailed with time and information to compare to each other. With each group living a different type of lifestyle, I was able to combine the needs of each lifestyle into this building and provide for a larger group of people. My research and findings influenced my design to include program elements and details within the create a mixed-use senior living community.

THESIS FINAL REVIEW

PROJECT SOLUTION DOCUMENTATION



Community

A sense of neighborhood is created by including spaces to gather and socialize around the site for residents and non-residents to enjoy.

Independence

Residents feel a sense of freedom and comfort with the transitional design elements implemented for aging in place.



Healthy Living

The program encourages exercise of one's mind and body with access to a variety of activities within the building.

Accessibility

Safety and convenience for the users is integrated into the design of the building and site.



Engagement

Intimate spaces throughout the building foster a connection between residents and non-residents.

Mindset

The building allows the mentality of aging to be transition into a favorable chapter of life.



The six goals above were set for my project from the beginning. The goals were influenced by my research of senior needs. The needs of seniors were the focus of my project followed by using an existing building to establish a place where the needs could be met. Using case studies and research, each goal was fulfilled to the best it could be through my redesign of the existing mall.

THESIS FINAL REVIEW

DIGITAL PRESENTATION

A NEW PHASE OF AGING

SAMANTHA SCHRADER | SPRING 2021 | FINAL THESIS PRESENTATION



Thesis:

How can reprogramming an underutilized building provide healthy and positive lifestyles for the aging population?

Inspiration



GOAL:

Re-imagination of an underutilized mall to provide a space for aging in place and engagement within society for the seniors in the community.

TPOLOGY:

Independent and Assisted Senior Living Community

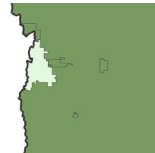
JUSTIFICATION:

- Demand
- Longevity of Life
- Redefining Age

The Site



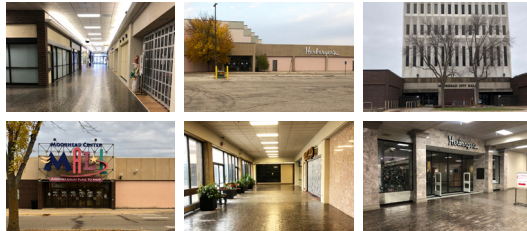
REGION | MIDWEST, UNITED STATES



CITY | MOORHEAD, MINNESOTA



SITE | MOORHEAD CENTER MALL



North



South



East



West

THESIS FINAL REVIEW

DIGITAL PRESENTATION



Biking/ Walking Trails



Existing Parking Ramp



MAI Bus Stops



Red River

Research

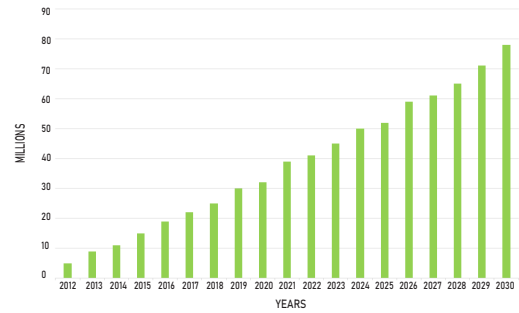
Baby Boomers

"A person born in the U.S. following the end of World War II (usually considered to be in the years from 1946 to 1964)"
- Merriam Webster Dictionary

Aging in Place

"Allows residents the opportunity to remain in the living communities as they age and adapt to the needs and abilities of the individual."
- The History of Senior Care

RETIREMENT OF BABY BOOMERS



Needs of the Aging Population:

- Connection with Nature
- Sense of Independence
- Physical Participation
 - Sense of Purpose
- New Experiences and Knowledge
 - Sense of Belonging
- Engagement & Connection with Society

Process

- 
Community
 A sense of neighborhood is created by including spaces to gather and socialize around the site for residents and non-residents to enjoy.
- 
Independence
 Residents feel a sense of freedom and comfort with the transitional design elements implemented for aging in place.
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Healthy Living
 The program encourages exercise of one's mind and body with access to a variety of activities within the building.
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- 
Engagement
 Intimate spaces throughout the building foster a connection between residents and non-residents.
- 
Mindset
 The building allows the mentality of aging to be transition into a favorable chapter of life.

Preliminary Site Considerations

- A) Eliminate parking to provide additional green space and vegetation on site
- B) More efficient vehicular parking layout
- C) Promote drop offs and visits with easy access to building and site
- D) Pedestrian friendly site
- E) Connect building and site with walking/biking trails and river
- F) Establish entrance for daycare and building staff
- G) Encourage the use of on site transportation
- H) Views of Red River
- I) Enhance the views entering Moorhead



THESIS FINAL REVIEW

DIGITAL PRESENTATION

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- E) Connect building and site with walking/biking trails and river
- F) Establish entrance for daycare and building staff
- G) Encourage the use of on site transportation
- H) Views of Red River
- I) Enhance the views entering Moorhead



THESIS FINAL REVIEW

DIGITAL PRESENTATION

Existing vs. New



Existing vs. New



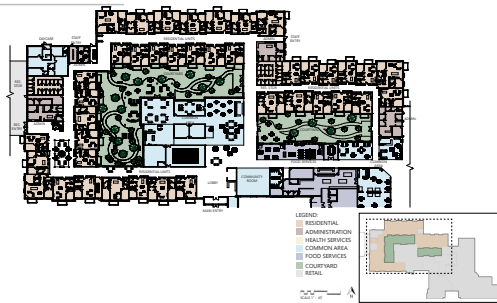
Site & First Floor



Circulation



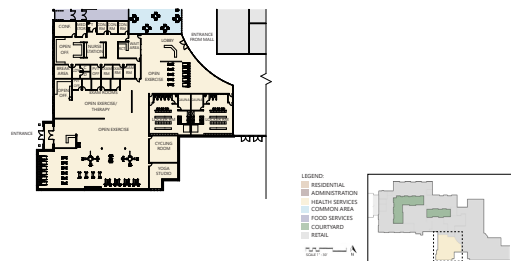
Residential



Administration

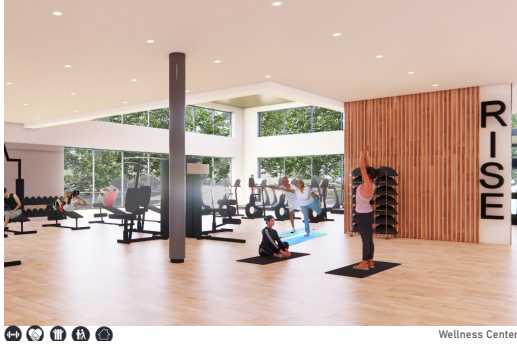


Health Services

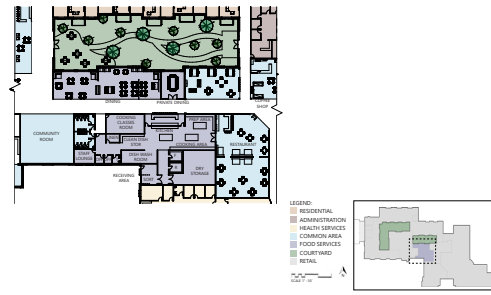


THESIS FINAL REVIEW

DIGITAL PRESENTATION



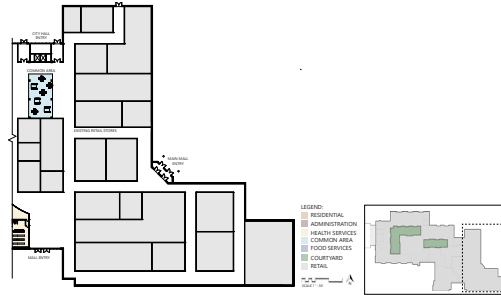
Food Services



Common Space



Retail



Second Floor



Courtyards



THESIS FINAL REVIEW

DIGITAL PRESENTATION

Section Cut



Courtyard



THESIS FINAL REVIEW

DIGITAL PRESENTATION BOARD

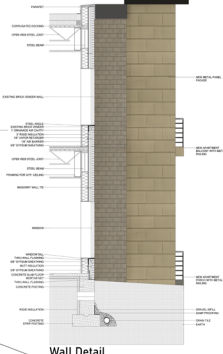
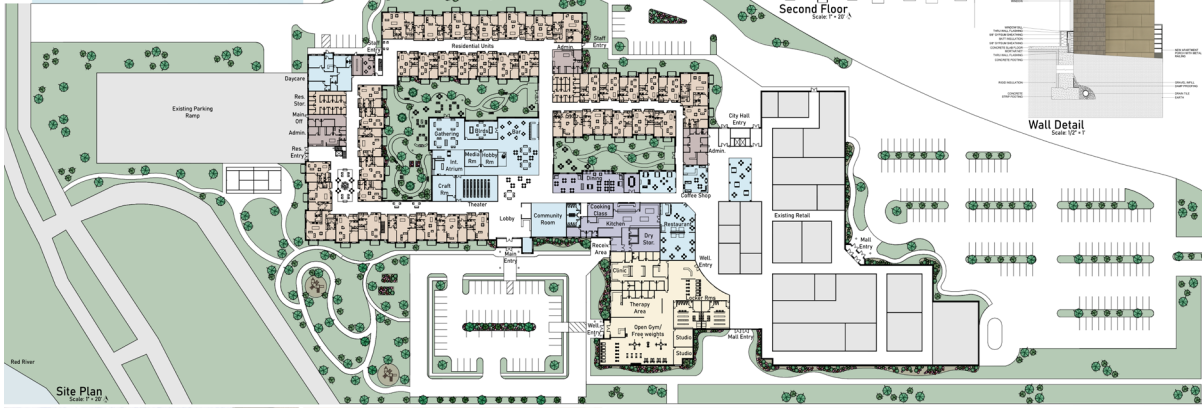


A NEW PHASE OF AGING

Moorhead, Minnesota
 Population: 38,045
 City Area: 22.52 MI
 Twin City: Fargo, ND

The "Retirement Wave" began with the first Baby Boomers turning 65 years old. Between 2011 and 2030, 79 million Baby Boomers will retire, or about 10,000 people per day. Minnesota will have an average of 1 in 5 people retiring per day until 2030. This trend is predicted to maintain as the population continues to live longer than ever before.

- Community**
 A sense of neighborhood is created by including spaces to gather and socialize around the site for residents and non-residents to enjoy.
- Independence**
 Residents feel a sense of freedom and comfort with the transitional design elements implemented for aging in place.
- Healthy Living**
 The program encourages exercise of one's mind and body with access to a variety of activities within the building.
- Accessibility**
 Safety and convenience for the users is integrated into the design of the building and site.
- Engagement**
 Intimate spaces throughout the building foster a connection between residents and non-residents.
- Mindset**
 The building allows the mentality of aging to be transitioned into a favorable chapter of life.



Courtyard View



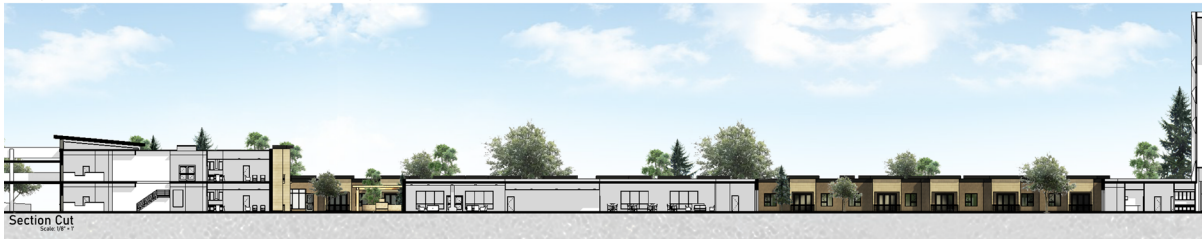
Common Space



Interior Greenhouse



Wellness Center



Section Cut

ANALYSIS

THESIS APPENDIX

PREVIOUS STUDIO EXPERIENCE

2 Y E A R

FALL | CINDY URNESS

TEA HOUSE

BOAT HOUSE

SPRING | MILTON YERGENS

BIRD HOUSE PROJECT

DWELLING PROJECT

MIXED USE PROJECT

3 Y E A R

FALL | RONALD RAMSAY

SHAKER HOUSE

CHAPEL

SPRING | EMILY GUO

ASSISTED LIVING PROJECT

NATIVE AMERICAN MUSEUM

4 Y E A R

FALL | AMAR HUSSEIN

CAPSTONE PROJECT

SPRING | PAUL GLEYE

STUDY ABROAD

5 Y E A R

FALL | LANCE JOSAL

FENWAY PARK SURGE FACILITY

THESIS APPENDIX

CITATIONS

Aguilar, Cristian. "Elderly Care Campus / Areal Architecten." ArchDaily, ArchDaily, 23 Apr. 2014, www.archdaily.com/498917/elderly-care-campus-areal-architecten.

Boštjan, Boštjan, et al. "The Relationship of the Elderly Toward Their Home and Living Environment." JSTOR, 2017, www-jstor-org.ezproxy.lib.ndsu.nodak.edu/stable/pdf/26266353.pdf?ab_segments=0%2Fbasic_SYC-5187_SYC-5188%2F5188&refreqid=fastly-default%3Aaa2bb2690fc8ceefcba39c05844edb0a.

Chahine, Aline. "Housing and Health Care Complex Eltheto / 2by4 Architects." Architecture Lab, 25 Dec. 2015, www.architecturelab.net/housing-and-health-care-complex-eltheto-2by4-architects/.

"Elderly Residential Home / Atelier Zündel Cristea" 19 May 2015. ArchDaily. Accessed 7 Oct 2020. <<https://www.archdaily.com/630825/elderly-residential-home-atelier-zundel-cristea>> ISSN 0719-8884

"Eltheto Housing and Healthcare Complex / 2by4-architects" 29 Sep 2015. ArchDaily. Accessed 8 Oct 2020. <<https://www.archdaily.com/774238/eltheto-housing-and-healthcare-complex-2by4-architects>>

"Free Styles for Google Maps." Snazzy Maps, snazzymaps.com/.

Geologic Cross-Section of Fargo, North Dakota, www.ndsu.edu/fargo_geology/xsection.htm.

"Geographic Information Systems." City of Moorhead : Geographic Information Systems, gis.cityofmoorhead.com/.

"Griffin Plaza." KTG Architecture + Planning, ktgy.com/work/griffin-plaza/.

THESIS APPENDIX

CITATIONS

- "The History of Senior Care." Generations Healthcare Management, www.generationshcm.com/the-history-of-senior-care.
- Jeremy Moore, Minnesota Department of Natural Resources. MnTO PO, arcgis.dnr.state.mn.us/maps/mntopo/.
- Liao, Alice. "Getting Better with Age: Design for Senior and Assisted Living Facilities." Architect, 29 June 2018, www.architectmagazine.com/practice/getting-better-with-age-design-for-senior-and-assisted-living-facilities_o.
- Perkins, Eastman. Building Type Basics for Senior Living. Wiley, 2013.
- "Red River of the North State Water Trail." Minnesota Department of "Red River of the North State Water Trail." Minnesota Department of Natural Resources, www.dnr.state.mn.us/watertrails/redriver/index.html.
- Regnier, Victor. Housing Design for an Increasingly Older Population: Redefining Assisted Living for the Mentally and Physically Frail. John Wiley & Sons, Inc., 2018.
- "U.S. Census Bureau QuickFacts: Moorhead City, Minnesota." Census Bureau QuickFacts, www.census.gov/quickfacts/moorheadcityminnesota.
- "WeatherSpark.com." Average Weather in Moorhead, Minnesota, United States, Year Round - Weather Spark, weatherspark.com/y/9081/Average-Weather-in-Moorhead-Minnesota-United-States-Year-Round.