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FARGO, ND

Design
THESIS

By
Tiffany A. Miller



ACTIVE ADULT COMMUNITY

“Senior Housing to Promote Active Intellects”

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

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In Partial Fulfillment of the Requirements
for the Degree of
(Bachelor of Architecture)

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May 2005
Fargo, North Dakota

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Through this thesis project I addressed Fargo, North Dakota's growing population that demands housing for individuals of all income levels. I proposed an active adult community located in downtown that will provide seniors with housing that promotes a healthy active intellect and community unity within itself and the city. I feel that developing in the downtown area will encourage a more diverse population and will create a strength among residents to support each other promoting an active, high quality of life.

INTRODUCTION

The life expectancy of a baby born in 1900 was less than 50 years, and a child born today will probably live more than 75 years. This suggests that retirement communities in the United States and in other developed countries have an excellent market opportunity if they consider the preferences of the elderly population.

In this decade architects, builders, and developers will need to build homes and communities that allow active adults to maintain connected with friends and family. According to the Department of Health and Human Services (2003), persons 65 years and older numbered 35.9 million in 2003, they represent 12.3% of the U.S. population, and the older population will continue to grow significantly in the future (http://www.aoa.dhhs.gov/prof/Statistics/statistics_pf.asp).

With such a large segment of our population that will be both affluent and of retirement age, some are predicting a surge in the demand for retirement housing that will last until the last Baby Boomers turn 65 in the year 2029. "This generation will redefine retirement housing in much the same way that it redefined music, religion, leisure, and norms and values" (Moschis).

I propose a residential development in downtown Fargo, ND for active seniors that seek to create a socially interactive environment and promote an active way of life. This project will provide housing, recreational activities, and community unity that active seniors desire within downtown. I chose the heart of downtown because I feel that the need for senior housing is not currently being met.

History

Retirement communities first appeared in the United States in the 1920's when fraternal organizations, religious groups, and labor unions began purchasing inexpensive land in Florida to develop into retirement living accommodations for their older members. However, the severe economic conditions that prevailed in the late 1920's curtailed this short-lived trend and it was not until after WWII that private real estate developers again turned their attention to building communities designed specifically for older residents. Retirement housing first gained momentum in the United States with Youngstown in 1954, and then with the widely successful Sun City opening New Years Day, 1960 (Moschio).

Location

Regional

Longitude: 97°W to 104°W

Latitude: 45° 55'N to 49°N

Size: 340 miles long and 211 miles wide

Total Area: North Dakota covers 70,704 square miles, making it the 19th largest of the 50 states

Land Area: 68,994 square miles

Water Area: 1,710 square miles

Highest Point: The highest point in North Dakota is White Butte at 3,506 feet above sea level

Lowest Point: The lowest point in North Dakota is the Red River at 750 feet above sea level

Major Rivers: James River, Missouri River, Red River

Major Lakes: Lake Sakakawea, Lake Oahe

(Geography of North Dakota, n.d.)



Figure 1: Location of North Dakota on United States Map



Figure 2: State Map of North Dakota

Introduction

Active Adult Community

Fargo, ND is part of The Great Plains region of the United States. This includes the states of Texas, Oklahoma, Kansas, Nebraska, North Dakota, South Dakota, New Mexico, Colorado, Wyoming, and Montana. On March 2, 1861, the Congress of the United States created the Dakota Territory, which consisted of the present-day states of North Dakota and South Dakota, and most of Montana and Wyoming. The name was taken from that of the Dakota or Sioux Indian Tribe. In their language, Dakota means “allies.” In 1863 the size of the territory was reduced to the area of North and South Dakota. With increasing immigration and settlement, by the late 1870s Dakotans felt inadequately represented by territorial status and began pushing for statehood, either as one state or two. By the late 1880s, northern Dakota had 190,000 residents and southern Dakota had over 340,000, population sizes that justified statehood. However, because of alphabetical position, North Dakota is often considered the 39th state.

The land in this region has a lot of variation. From the Black Hills in South Dakota, to the Badlands in North Dakota, to the Dunes of Nebraska and Colorado. The state of North Dakota is bordered to the north by Canada, Minnesota to the east, South Dakota to the south, and Montana to the west (Remele, 1998).



Figure 3: North Dakota Badlands

Location

City

Fargo is the largest city in North Dakota. It is located on the east side of the state 75 miles from Grand Forks and across the Red River of the North from Moorhead, Minnesota. Fargo itself is located on the bottom of what was a massive, ice-dammed lake: Glacial Lake Agassiz.

Much of the history of Fargo and Moorhead is recorded from the 1850s to the present. Commercial activity on the Red was highlighted by 50 years of riverboat traffic in the late 1800s that transported trade goods and passengers up and down the valley. The first platted settlement, “Fargo in the Timber” was located near the river between the existing Main Avenue and NP Avenue Bridges. There are many historic sites that can still be easily identified by historical records, ruins, or actual structures still in use. It was named for William George Fargo (of Wells, Fargo & Company), a pioneer in the shipment of goods by express (DSU Associates, 2000).



Figure 4: Location of Fargo, North Dakota

Introduction

Active Adult Community

Location

Site

The site was chosen to be in downtown to bring back the diverse spirit that downtown is trying to promote. The proposed site is bordered by 1st Ave N., 2nd St. N., 3rd Ave N., and 3rd St. N. with a strong visual connection between Downtown Fargo and Moorhead. Although the space between 2nd Street and the River is narrow, there is quality vegetation on the river edge and the bank. Moorhead's Viking Ship Park has been highly developed, and is directly across the River, as is the Heritage Hjemkomst Center. It is in close proximity to the library, City Hall, and the Bus Depot. The location is pedestrian friendly with walking paths along the Red River and is linked to other areas in the city through public transportation. The site will allow residents to experience the richness in the entertainment atmosphere that is captured in the heart of downtown (DSU Associates, 2000).

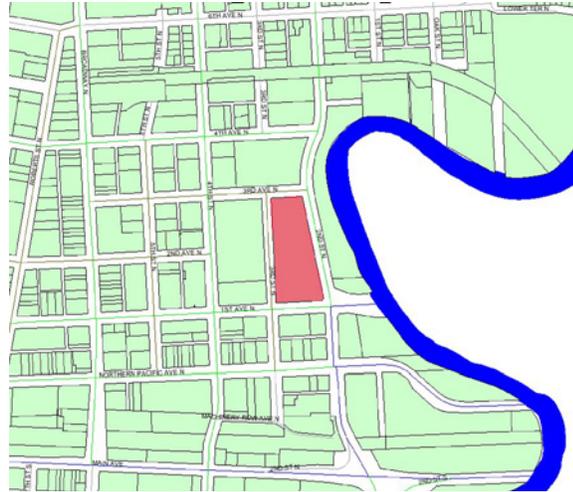


Figure 5: Site Location in Fargo

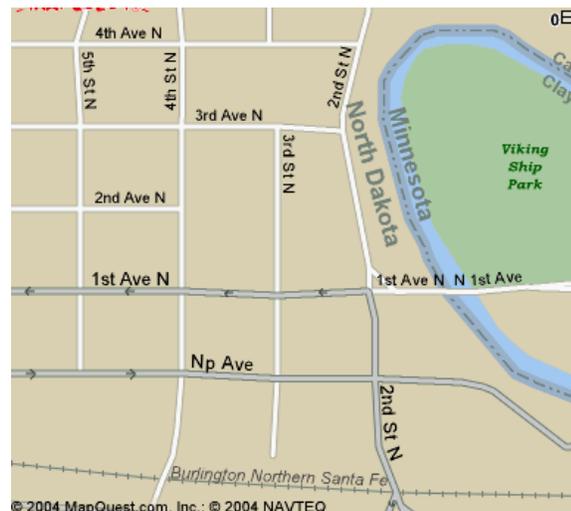


Figure 6: Site Location in Fargo

Unifying Idea

There is a lot of talk about retirement these days, especially since the Baby Boom generation, which totals 76 million, turned 55. “There are two phases of retirement; the early years when you can still manage yourself, home, and be an active part of the community. And the later years, when you may be dependent on others for your simplest needs” (Thompson, 2001). There are those seniors that want to establish themselves in a place that values people, and where neighbors are not opposed to looking out for each other.

The unifying idea of this project is that aging is a natural part of life and it informs the solutions meant for people late in their life. The intent is to provide seniors with housing that promotes a healthy active intellect and community unity within itself and the city of Fargo. The focus of this project is to address and meet the needs of active seniors, while promoting the integrity of downtown Fargo.

DESCRIPTION

Fargo has a growing population that demands housing for all individuals. However not everyone's needs will be met by moving into the sea of apartment complexes and bi-level homes spreading across the city. For the seniors that want or require relocation, there are not a lot of options. Moving to an area that will promote and enhance their current levels of activity is not a possibility for most seniors in Fargo. As the population increases so does the problem of urban sprawl, which dissipates the strength of downtown. Developing in the downtown area will encourage a diverse population and create a community driven ethic that allows residents to support each other in promoting an active, high quality of life.

Description

Active Adult Community

Major Project Elements

The emphasis of this project is to create a residential building/community space which helps to curb urban sprawl, universal design, and promoting physical activity. New construction would provide apartment and condominium style layouts that would include individual one, two, and three bedroom plans. There would be common community amenities such as a fitness center, dining facilities, and wellness center.

Several interior breakout rooms (open gathering areas) are provided to encourage gatherings, activities, and socialization among the residents outside of their homes. The intent is to provide residents with opportunities to engage with others that have similar interests, develop friendships, and enhance the social aspect of community living.

Outdoor green spaces, natural lighting, and vegetation is also incorporated into the design. These spaces are used to enhance the building, provide environmental benefits, and provide residents with a non-institutional feeling. Linking these visually and physically to the current walking paths along the Red River will allow residents to see and partake in physical activity.

Private underground parking is provided to residents while addressing security concerns. Additional on site parking is available for employees and visitors frequenting the site.

User Description

There are two major groups that are users in this development, residents of the community, and workers who maintain and coordinate the success of the community such as an activities director, maintenance staff, and facility director.

Major users are residents of Fargo and the surrounding area who are over the age of 55. Income or educational is not a factor in gaining residence in this community and various assistance programs are available to those who qualify. This generational group is targeted because housing demands are not currently met. I have also targeted this group to provide and encouraged growth of the inner city.

Additional users of this space are visitors, friends, or family members. Parking is taken into consideration, realizing that not all residents will require a parking spot since some may take public transportation, walk, or bike.

Personnel that may be required to allow the community to function as intended will be: facility director (2), activities director (2), administration (2), receptionist (1), wellness advisor (1), sales & marketing (1), housekeeping (6), dining (7), and fitness operators (2).

The facility directors will be in charge of maintaining the grounds and conduct simple maintenance within the units. The activities directors will be in charge of coordinating group activities within the facility and linking them to the Fargo community. Two individuals will be responsible for bookkeeping, handling maintenance requests, and rent collection. One receptionist will be needed for visitors and questions. The sales and marketing

representative will be responsible for targeting new residents and advertising the facility. Six housekeeping staff members are needed to provide housekeeping services in the units. Seven dining personnel are needed including one chef to cook the meals and a wastestaff to distribute the food and retrieve requests. One wellness advisor will be on site at scheduled times throughout the week for individuals that want medical advice. Two fitness specialists that will help residents in the fitness center with questions or machine usage, and conduct classes.

Client Description

The client for this residential development will have to be a company that could finance such a project. Most likely the client will be a property management company that has a special interest in adult communities. Profit could come from the sale of condos and the residual income from rental apartments.

Design Methodology

Literature, interviews, and case studies of active adult communities, urban sustainability, and universal design are strategies used to solve the problem of adequate senior housing. New urbanism and sustainability concepts are guiding principles in promoting residential growth in downtown.

Literature

The purpose to researching active adult communities is to find the most important information available. The following ways are used to find the relative information:

- Library catalogues
- Periodicals
- Journals
- Internet searches
- Interview

This process is used in the beginning of the project, but will be an ongoing process throughout.

Interview

The purpose of an interview is to gain unknown information about active adult communities from individuals who demonstrate relative knowledge. During the interviewing process it is important to encourage users to identify any aspects that are important to them and towards their activity within the community. All information will be recorded of the individual and comments throughout the process.

This is also a process that can be beneficial in the beginning of the project to lead the researcher in the right direction, but can be continuous.

Case study

The purpose of case studies is to gain knowledge from the way other designers have approached similar design situations. A thorough analysis must be completed when looking at previous projects.

PROJECT EMPHASIS, GOALS, & OBJECTIVES

Project Emphasis, Goals, & Objectives

Active Adult Community

As an individual ages they may find themselves at a crossroad, they do not have the need to live in a large home any longer, but do not want to live in the vast apartment complexes throughout the city. The goal is to create an independent active adult community in an urban environment. To achieve this there are three major objectives in the design, curbing urban sprawl, implementing universal design, and promoting physical activity. I have addressed other design issues such as circulation, physical comfort, energy efficiency, social interaction, and privacy.

The major focus is creating an urban adult community that promotes a healthy active environment and does not contribute to urban sprawl. Not only does sprawl contribute to climate change, it consumes large quantities of land, segregate houses from shops and workplaces, dependant on private cars, and has little regard for the natural environment.

According to Duany and Plater Syberk suburban sprawl is not the product of natural urban evolution. "It is the direct result of current zoning codes that dictate wide streets, huge lots, attached two-car garages, and the absolute separation of houses from shops and workplaces. The result is that the typical suburban family now makes a dozen automobile trips everyday because their home is cut off from stores and schools by impassable rivers or roaring traffic" (Walljasper, 2001, p.1).

Older people, many of whom cannot or do not desire to drive are restricted. I have paid careful attention to the details that make an adult community a pleasant place to live. I designed a community that has architectural grace and allows seniors to continue living a high quality of life.

I have addressed the ranges of adult capabilities and universal design objectives that must be implemented. The authors of the Principles of Universal Design (architects, product designers, engineers, and environmental designers), collaborated to establish the following principles to aid in designing:

Project Emphasis, Goals, & Objectives

Active Adult Community

Universal Design Principles:

Equitable Use

-the design is useful and marketable to people with diverse abilities.

Flexibility in Use

-the design accommodates a wide range of individual preferences and abilities.

Simple and Intuitive Use

-use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

Perceptible Information

-the design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensor abilities.

Tolerance for Error

-the design minimizes hazards and the adverse consequences of accidental or unintended actions.

Low Physical Effort

-the design can be used efficiently and comfortably and with minimum fatigue.

Size and Space of Approach and Use

-appropriate size and space is provided for approach, reach, manipulation, and the use regardless of user's body size, posture, or mobility.

SITE ANALYSIS

Soil/Water Survey

Underlying Fargo are about 30 m of sediments whose engineering characteristics are extremely weak. They are dominantly clays, derived as meltwater rivers dispersed fine-grained sediments into Lake Agassiz. The clays have expansive properties: they can absorb vast amounts of water and then give up that water during drought. As the clays absorb water, they expand and become weak and plastic. As they release water, they contract and become hard and brittle. These expansive properties make it difficult to engineer and protect permanent structures in the Valley. Street surfaces, sidewalks, water lines, etc., rise and fall with the water content of the clays. Because the strength of these clays is generally low, heavier structures in Fargo must first have considerable foundation support, requiring piers (caissons) or pilings that pass entirely through the package of sediments to support the structure on firmer glacial materials beneath.

Rivers that flow northward are actually not particularly rare (there are many in the United States). But the Red River of the North is one of the few drainages in the contiguous 48-states whose waters ultimately drain into the Arctic Watershed. Waters of the Red flow northward into Lake Winnipeg in Manitoba. There, they mix with waters of the Saskatchewan River, whose headwaters lie in the Canadian Rockies. Lake Winnipeg, itself, is drained by the Nelson River, which flows northeastward into Hudson Bay at York Factory, Manitoba (Schwert, 2002) .

Climate Data

The climate of North Dakota is a cold climate. Long periods of time that are below the freezing point create a short growing season. North Dakota itself experiences hot summers and cold winters; even in summer the days are warm, but the nights are cool. The average maximum July temperature is 88 degrees and the average maximum January temperature is 26 degrees. On the average North Dakota receives 17" of precipitation per year and has low humidity, lots of wind, and plenty of sunshine (<http://discovernd.com/aboutsymbols.html#climate>).

Windspeed

Regional

The average wind speed in North Dakota is greatest in late winter and early spring and the least in summer. Average wind speeds in the Red River Valley are 10 to 20 percent higher than in the rest of the state.

The fastest wind speed clocked over a one-minute period was 115 miles per hour. This wind speed, which greatly exceeds the threshold value of 75 miles per hour for hurricanes, was recorded on June 9, 1959. High winds in winter can be

sustained over a period of several hours, and in rare cases two to three days, while in summer the duration of the strong winds is usually on the order of a few minutes.

City

On an annual basis, the prevailing wind flow at Fargo shows strong incoming north and north-northwest flow and a strong south and south-southeast return flow. Wind from an easterly or southwesterly direction occurs much less frequently than from other directions.

The seasonal wind roses for January, April, July, and October are similar to the annual wind roses. Seasonal wind roses differ from the annual wind rose nearly always because the wind so often changes direction, rather than a change in the prevailing wind pattern (Jensen, 1998).

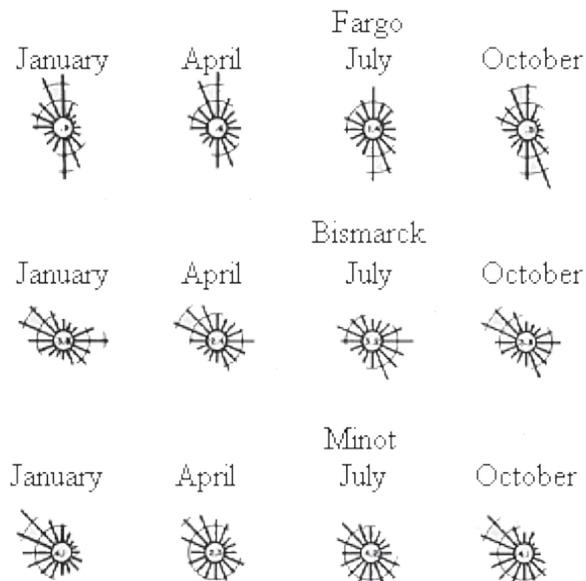


Figure 7: USGS Northern Prairie Wildlife Research Center Wind Roses

Sunshine

North Dakota receives a higher percentage of possible sunshine and more hours of sunshine annually than any state on the Canadian border with the exception of Eastern Montana which receives about the same amount. On an annual basis, North Dakota receives 58 to 62 percent of total possible sunshine. July is the sunniest month when approximately three-fourths of the possible sunshine is recorded, while November is the poorest month for sunshine when only 40 to 46 percent of possible sunshine is registered. Annually, North Dakota registers about 2,600 hours of sunshine in the east to more than 2,800 hours of sunshine in the west. Roughly 25 percent of the total hours of sunshine occur in July and August, and this is a large contributing factor to North Dakota's beautiful summer season.

Cloundiness

More days average out to be cloudy than clear or partly cloudy over the course of a year. The most cloudy days occur from late fall to early spring. The number of clear days is about the same for all months from November through June. In July the number of clear days sharply increases and remains at about the same level through August, before becoming somewhat fewer in September and October (Jensen, 1998).

Site Analysis

Active Adult Community

Context

The site is currently the existing paylot for City Hall. The map below shows the site location, and the corresponding photos of the site surroundings are indicated along side.

-To the north of the site is the Howard Johnson hotel with Side Street bar and grill.

-To the west is City Hall.
-To the south is IHJI Ammunition building.
-To the east is the Red River, which is shared with Moorehead.
-Existing vegetation is very sparse and underdeveloped.



Figure 8: Looking North



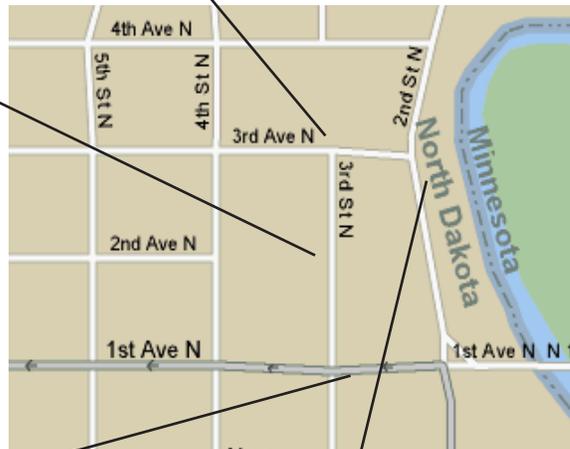
Figure 9: Looking West



Figure 10: Looking South



Figure 11: Looking East



Zoning

According to the Fargo Land Development Code (2003), the proposed site is zoned Downtown Mixed-Use. Which will allow a residential community to be built along with no parking requirements. The Downtown Mixed-Use district (DMU), is intended to preserve and enhance the City's downtown area. The district allows a broad range of uses in order to enhance downtown Fargo's role as a commercial, cultural, governmental, and residential center. Development is intended to be pedestrian-oriented with a strong emphasis on a safe and attractive streetscape.

Front Setback

No front setback shall be required unless buildings immediately adjacent to the site are set back, in which case a setback equal to the average setback of the adjacent buildings shall be required. In no case shall setbacks of greater than 10 feet be required.

Required Materials

All walls visible from the street shall be finished with architectural materials such as brick, glass, stone, ceramic, stucco, precast panels, exterior insulation finish systems, or curtain walls.

Prohibited Materials

The following materials are prohibited that are visible from the street: metal panels; non-residential grade metal siding; non-residential grade wood-based materials; asphalt; concrete blocks or cinder blocks. Concrete block may be used only if it is burnished, standing flute or sculptured. Mirrored glass or one-way glass with a reflectance of greater than 40 percent shall be prohibited from covering more than 40 percent of the exterior walls.

Ground-Floor Transparency

At least 35 percent of the ground-floor facade of buildings along sidewalks shall be comprised of windows, doors and other transparent elements (e.g., glass block) that allow views into buildings, plazas or arcades. Calculations shall be based on the linear footage of the ground floor, and said transparent elements shall be a minimum of four feet in height (p. 13-16).

Demographics/Economy

Population of Fargo has continuously grown over the last several years and it is projected to continuously rise. With this rise could bring a change in the current demographics which are primarily 98% non-minority. The average age of these individuals is 35 years old and 42.6% of residents are married.

Based on the zip code of this site, the median income is just over \$31,000 which is lower than the national median, at about \$40,000. Even though the income level in Fargo is lower than the national average the cost of living here is also lower 91.7 points which is 11.06 points below the national average (U.S. Census Bureau, 2002).

CASE STUDIES

Vista Villa

Location: Vista Villa
720 Vista Dr.
Kimball, Nebraska 69145
308.235.4495

Architect: Mark Stormberg of
Tectonic Management
Group, Inc.

Type: Independent Living
Size: 42,376 sq. ft., 2 story structure

This independent senior community is for active couples over 55 in Western Nebraska. Vista Villa was designed to house 30 apartment units and 18 attached garages with a central elevator for easy access and to be energy efficient. The goal is to take advantage of the moderate climate, cool summer evenings, and warm sunny days.

The center offers a variety of living options that cater to the needs of the residents. Each apartment is designed for convenience, safety, community, and ease of use.

Amenities:

- Bi-monthly house keeping
- Social activities
- Continental breakfast
- Evening meal
- Indoor and outdoor maintenance
- Emergency response system
- Wellness center
- Clubroom
- Library
- TV room



Figure 13: Location of Kimball



Figure 14: Vista Villa Building

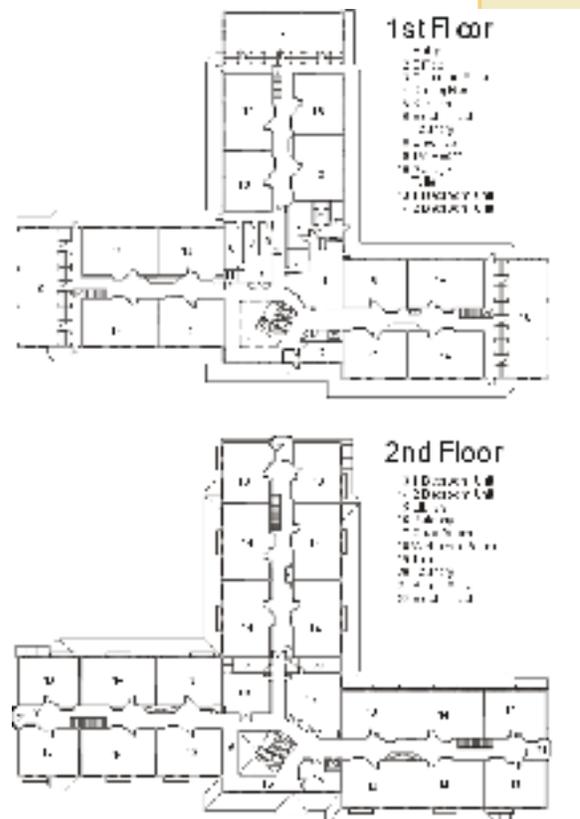


Figure 15: Floorplans

Case Studies

Active Adult Community

Waterford at Harwood Groves

Location: 1200 Harwood Drive
Fargo, ND 58104
701.476.1200

Architect: unknown
Type: Independent living
Assisted living
Memory care
Size: 142,701 sq. ft.



Figure 16: Location of Waterford



Figure 17: Waterford Building

This retirement community is part of a larger system of Waterford developments in eight states. They market themselves as having affordable homes that are right for seniors. Their goal is to “provide active adults with services and amenities that will allow for worry-free days, in a setting that is comfortable and attractive, combined with a sense of security”.

For the independent living residents, they offer programs to meet their social, cultural, and recreational needs. And as healthcare needs change, the facility provides residents requiring more supervision without making them move.

Amenities:

- Private dining room
- Library
- Convenience store
- Activity center
- Exercise and game rooms
- Creative arts studio
- On-site beauty/barber shop

Edina Park Plaza

Location: 3330 Edinborough Way
Edina, MN 55435
952.831.4084

Architect: Unknown
Type: Independent living
Personal care

Size: 1.5+ acres

This senior community is located in Edina, MN and is part of a larger system of Brookdale Properties. It prides itself on its close proximity to restaurants, The Mall of America, and the airport. They want their residents to keep active and enjoy the facility year round so it is integrated into a 1.5-acre indoor park. Their goal is to give residents plenty of opportunities to be active and social, while respecting their privacy.

Since the facility offers services ranging from independent living to personal assistance, residents are not required to move depending on their changing health needs.

Amenities:

- Dining program
- Housekeeping
- Scheduled transportation
- 24-hour staffing
- Educational programs
- Social events
- Outdoor gardening
- Exercise room
- Indoor pool
- Health clinic



Figure 20: Location of Edinborough Way

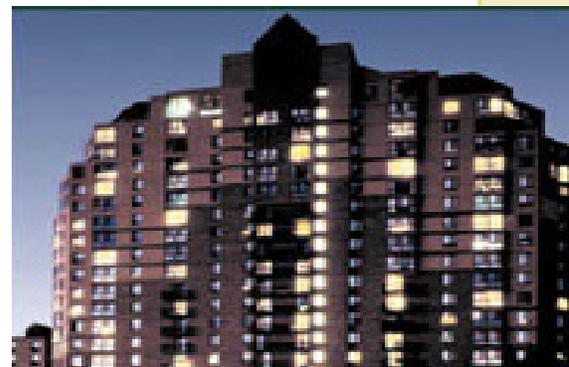


Figure 21: Edina Park Plaza Building

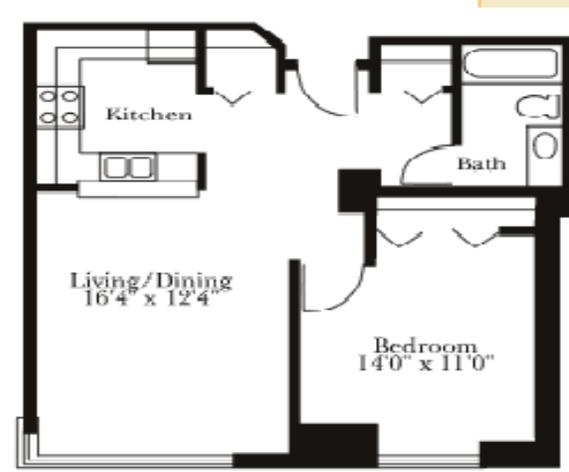


Figure 22: Park Plaza Floorplan

Case Studies

Active Adult Community

Rye Brook

Location: 1200 King Street
Rye Brook, NY 10573
866.774.9530

Developer: Forest City Enterprises real estate company

Type: Independent senior living

Size: 160 units

Glen Cove senior housing community is part of a larger system of Sterling Glen developments located throughout New York, Philadelphia, and Connecticut that offer assisted living, supportive senior living, independent senior living, and home health care. Their mission is to provide residents with a comfortable and dignified lifestyle that supports their desire for independence and personal freedom, enhances their well-being, and preserves their connection to family, friends and community.

The independent living residents are designed in response to seniors who want to maintain an active lifestyle, but without the burdens associated with home ownership. They are encouraged to partake in the scheduled activities within the larger community because they see the seniors as vital threads in the surrounding neighborhood in which they are located. Seniors can benefit from interacting with others of varying ages from young children to older adults in the rich social and cultural life of the region. The range of possibilities includes activities as diverse as mentoring school children, going on shopping expeditions, or enjoying a guided visit to the Metropolitan Museum of Art.

Amenities:

- Fine dining
- Weekly housekeeping/linen service
- Scheduled transportation
- Social and cultural activities
- Library
- Computer center
- Wellness/fitness center
- Hair salon and barber shop



Figure 18: Rye Brook Building



Figure 19: Rye Brook Interior

El Dorado

Location: Bellingham, Washington
Developer: Michael Golden of
Windward Enterprises,
Ltd.

Type: Independent living
Size: 80 single-level residencies

El Dorado retirement community prides itself on the safe and friendly community that they can provide for their active seniors. This independent living facility serves the Bellingham senior community very well, it is surrounded by groves of trees, landscaped grounds, and a view of Mt. Baker. The developers had the desire to provide hard working seniors the opportunity to relax and take care of themselves to help further improve their wellbeing.

El Dorado targets seniors that want to live in their own single-level home among other seniors with similar interests but do not want the hassles of maintenance. The rewards of having many active seniors with common interests within one community can promote a healthy active intellect and encourage more socialization that may not occur in typical housing developments.

Amenities:

- Electronically gated entrance
- Individual secure garages
- Medical emergency
- Multi-purpose room
- Library
- TV room
- Card room



Figure 23: El Dorado Building



Figure 24: El Dorado Interior



Figure 25: El Dorado Community Room

Casa Verde

Location: Venice, Florida

Type: Single-family home

Developers: WCI Communities, Inc.

Size: 3000 sq. ft.

“At WCI, we believe it’s our responsibility to constantly innovate within our industry and set the pace for homebuilders to build environmentally sensitive homes and sustainable communities” (WCI News Detail).

This is WCI Communities, Inc. second green home demonstration model located on the Venetian Golf and River Club in Venice, Florida. It is a contemporary model home incorporating more than 100 green features. The purpose of this design is to show home buyers and educate them on how easy it is to have a healthier home, lower energy costs, and help save the environment. The green principles that were focused on:

- Energy efficiency
- Water efficiency and quality
- Indoor environmental quality
- Site and landscaping
- Material selection
- Passive design
- Construction process

This example of a successful green home has qualities that can be incorporated into the design of an active adult community. It can be a focus of the community to be a resident that promotes a healthier home, lower energy costs, and contributing positively to the environment.

Greenwich Millennium Village

Location: London, England
Architect: Proctor and Matthews Architects
Type: Sustainable housing
Size: Unknown

This was a competition entry for the Greenwich Millennium Village; employing demonstration of economic sustainability and technological innovation. A few of the main objectives were to design a master plan that works for people not cars, model of environmentally sustainable development, utilizing a package of innovations that could be delivered, and produce visual and social connectivity.

This site is closely related to the site that I have chosen for my proposal of an active adult community, it is bounded by two major roads and the river. They worked hard to integrate the development into its surroundings with a network of sustainable means of transportation: bicycle and pedestrian routes. Courtyards on the site were landscaped to reduce the visual impact of parked cars and act as an amenity for the residents. However, the occupants are the ones responsible for these spaces. The form of the apartments exhibited stepping of the façade allowing the sun to penetrate the courtyards and into the units.

The ambitions of the architects were to “create sustainable places where people want to live, to make a new kind of urban place that will meet all the aspirations of people who would otherwise go to the suburbs (Edwards & Turrent, 2000, p. 88-95)”.

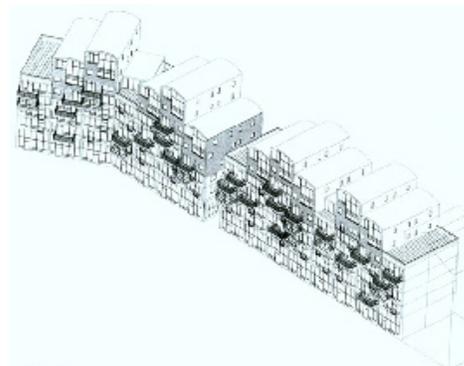


Figure 26: Typical apartment block, north facade.



Figure 27: Buildability targets at Greenwich Millennium Village.

PROGRAMMATIC REQUIREMENTS

Programmatic Requirements

Active Adult Community

Spatial Summary

This active adult community is designed for seniors seeking residential requirements that promote common active qualities, yet maintaining individual residencies. The following elements will provide high quality housing promoting community for older adults.

Lobby	600 sq. ft.
Reception/Info Desk	200 sq. ft.
Housing	
Apartments	
1 Bd.	700 sq. ft.
2 Bd.	1000 sq. ft.
3 Bd.	1500 sq. ft.
Condominiums	
1 Bd.	800 sq. ft.
2 Bd.	1000 sq. ft.
3 Bd.	1500 sq. ft.
Waste/Recycling	150 sq. ft.
Mailroom	100 sq. ft.
Parking	110 spaces
Storage	based upon need

Offices	
Administration	250 sq. ft.
Fitness Director	250 sq. ft.
Facility Director	250 sq. ft.
Sales & Marketing	250 sq. ft.
Dinning	250 sq. ft.
Activities Director	250 sq. ft.
Housekeeping	250 sq. ft.
Conference Rooms	300 sq. ft.
	250 sq. ft.
Activity Center	1100 sq. ft.
Community Room	1300 sq. ft.
Multi-Purpose Room	1750 sq. ft.
Formal Dining Area	1270 sq. ft.
Dining Area	2000 sq. ft.
Wellness Center	200 sq. ft.
Fitness Facility	
Lobby	500 sq. ft.
Information Desk	150 sq. ft.
Lockerrooms	2@1000 sq. ft.
Free-weights Room	1500 sq. ft.
Aerobics Room	1000 sq. ft.
Housekeeping Storage	2000 sq. ft.
Courtyard/Rooftop Gardens	
Support Spaces	
Mechanical & Electrical Room	10% of building sq.ft.
Elevator Equipment	300 sq. ft.
Storage	400 sq. ft.
Maintenance	400 sq. ft.

Programmatic Requirements

Active Adult Community

Lobby

Description:

A main gathering area for the tenants, guests, and employees upon entering the building. It will serve as a transition space between the public and private sectors, as well as the main entrance for visitors coming from the off-street parking.

Users:

Residents
Visitors of all ages
Employees

Functional Relationships:

Main circulation
Information desk

ECS Requirements:

Natural lighting
Lighting control
Thermal control
Ventilation

Equipment:

Automatic doors
Comfortable seating

Utilized:

24-hours

Reception/Info Desk

Description:

This area has twenty-four hour access and staffed accordingly to provide space for residents and visitors to ask questions and get information. Also a general area that new visitors can go to if they are unaware of the grounds.

Users:

Residents
Visitors
Employees

Functional Relationships:

Main circulation
Lobby
Offices

ECS Requirements:

Lighting control
Thermal control
Ventilation

Equipment:

Desk
Chairs
Computer

Utilized:

24-hours

Programmatic Requirements

Active Adult Community

Housing

Description:

Apartments and condominiums should be designed around an unnoticed “universal design”, insuring comfort and security. Each floor plan will have adequate square footage, and will ensure and enhance the quality of the space.

Users:

Residents
Visitors of varying ages

Functional Relationships:

Lobby
Main circulation
Parking
Mailroom

ECS Requirements:

Natural lighting
Lighting control
Ventilation
Acoustics
Flexible design

Equipment:

Kitchen appliances:
oven/range, refrigerator,
dishwasher, microwave
Air conditioner

Utilized:

24-hours

Parking

Description:

All tenants of the community are provided with parking. The number of spaces are dependent upon the number of units. Visitors will also have on-site parking for temporary use.

Users:

Residents
Visitors
Employees

Functional Relationships:

Main circulation
Housing

ECS Requirements:

Lighting control
Ventilation
Acoustics

Equipment:

Garage doors

Utilized:

24-hours

Programmatic Requirements

Active Adult Community

Laundry

Description:

Washers and driers used for laundry are provided in all the units.

Users:

Residents

Functional Relationships:

Main circulation
Housing

ECS Requirements:

Lighting control
Thermal control
Ventilation
Acoustics

Equipment:

Washers
Dryers

Utilized:

24-hours

Waste/Recycling

Description:

The residents have the convenience of not having to take the garbage outside of the building. In addition, there will also be recycling bins available to encourage recycling. Maintenance staff will then transfer the recyclables and waste to their proper disposal location.

Users:

Residents
Maintenance employees

Functional Relationships:

Main circulation

ECS Requirements:

Lighting control
Thermal control
Ventilation

Equipment:

Waste bins

Utilized:

24-hours

Programmatic Requirements

Active Adult Community

Mailroom

Description:

Denoted space for the postal service to deliver mail to the residents. Access to the mail boxes will be delivered and received from the same side. Again the purpose of an organized mail area is to promote residents to engage socially with other residents.

Users:

Residents
Postal service employees

Functional Relationships:

Main circulation
Housing

ECS Requirements:

Lighting control

Equipment:

N/A

Utilized:

24-hours

Residential Storage

Description:

Additional secured storage for the residents are provided, which can be rented individually based upon need. This space is provided for those who may need additional space for storage.

Users:

Residents

Functional Relationships:

Main circulation

ECS Requirements:

Lighting control

Equipment:

Locks

Utilized:

24-hours

Programmatic Requirements

Active Adult Community

Administration Office

Description:

The headquarters for accounting and bookkeeping. Employees can have new residents sign leases, store paperwork, and document rent invoices as well as other payments.

Users:

Employees

Functional Relationships:

Main circulation
Lobby
Information desk
Other offices

ECS Requirements:

Natural lighting
Lighting control
Thermal control
Ventilation

Equipment:

Desk
Chairs
Computer

Utilized:

8am-6pm

Fitness Office

Description:

This office is for the personnel that will be needed for membership paperwork, maintaining proper machine maintenance, and organization group classes.

Users:

Employees

Functional Relationships:

Main circulation
Lobby
Information desk
Other offices

ECS Requirements:

Natural lighting
Lighting control
Thermal control
Ventilation

Equipment:

Desk
Chairs
Computer

Utilized:

8am-6pm

Programmatic Requirements

Active Adult Community

Facility Office

Description:

This office is for the organization of maintenance on the grounds and within the units.

Users:

Employees

Functional Relationships:

Main circulation
Lobby
Information desk
Other offices

ECS Requirements:

Natural lighting
Lighting control
Thermal control
Ventilation

Equipment:

Desk
Chairs
Computer

Utilized:

8am-6pm
Available for emergency
contact

Sales & Marketing Office

Description:

This office is primarily for marketing and sales of the community. The goal is to target new residents for the community through promotion and advertising.

Users:

Employees

Functional Relationships:

Main circulation
Lobby
Information desk
Other offices

ECS Requirements:

Natural lighting
Lighting control
Thermal control
Ventilation

Equipment:

Desk
Chairs
Computer

Utilized:

8am-6pm

Programmatic Requirements

Active Adult Community

Dinning Office

Description:

This office is for the organizing of meals, providing menu information, and hiring of chiefs and staff. The need for a professional chief is to provide residents with fine dining instead of cafeteria food. The intent is to provide residents with a healthy well prepared meal when they do not feel like cooking at home.

Users:

Employees

Functional Relationships:

Main circulation
Lobby
Information desk
Other offices

ECS Requirements:

Natural lighting
Lighting control
Thermal control
Ventilation

Equipment:

Desk
Chairs
Computer

Utilized:

8am-6pm

Activities Director Office

Description:

The primary responsibility of the Activities director will be to organize and manage activities within the community and the city as a whole.

Users:

Employees

Functional Relationships:

Main circulation
Lobby
Information desk
Other offices

ECS Requirements:

Natural lighting
Lighting control
Thermal control
Ventilation

Equipment:

Desk
Chairs
Computer

Utilized:

8am-6pm

Housekeeping Office

Description:

An office is needed for the organization of residents that want to have their homes cleaned. Personnel is needed to establish cleaning times, manage tasks and staff.

Users:

Employees

Functional Relationships:

Main circulation
Lobby
Information desk
Other offices

ECS Requirements:

Natural lighting
Lighting control
Thermal control
Ventilation

Equipment:

Desk
Chairs
Computer

Utilized:

8am-6pm

Conference Rooms

Description:

There are two conference rooms provided in the building, one smaller and one larger, for meetings of various nature. Employees can bring in families and future residents to discuss issues relative to residency.

Users:

Employees

Functional Relationships:

Main circulation
Offices

ECS Requirements:

Lighting control
Thermal control
Ventilation

Equipment:

Table
Chairs

Utilized:

8am-6pm

Programmatic Requirements

Active Adult Community

Activity Center

Description:

This is a place where scheduled and independent community activities can take place to promote socialization and entertaining such as; hobbies, crafts, bin go, cards, musicals etc. The purpose of this space is to have it accessible to all residents to get them out of their individual homes and meet others that have similar interests. It is to provide the added space that most individuals do not have in their apartments

Users:

Residents
Visitors of varying ages

Functional Relationships:

Main circulation
Housing

ECS Requirements:

Natural lighting
Lighting control
Ventilation
Acoustics
Flexible design

Equipment:

N/A

Utilized:

24-hours

Community Room

Description:

This space acts as the central gathering space for residents and their visitors, the purpose is to enhance a neighborhood atmosphere. This area can encourage socializing through different group activities and behave like an indoor front yard.

Users:

Residents

Functional Relationships:

Main circulation
Lobby
Housing

ECS Requirements:

Natural lighting
Lighting control
Thermal control
Ventilation
Acoustics
Flexible design

Equipment:

Tables
Chairs

Utilized:

24-hours

Programmatic Requirements

Multi-Purpose Room

Description:

This room is similar to the activities center and community room and in addition will contain computers for residential use. Scheduled and independent activities will take place to promote socialization among residents.

Users:

Employees

Functional Relationships:

Main circulation
Housing

ECS Requirements:

Natural lighting
Lighting control
Thermal control
Ventilation
Acoustics
Flexible design

Equipment:

Tables
Chairs

Utilized:

24-hours

Formal Dining Area

Description:

This space will be for residents that want to formally entertain their guests but may not have the room within their homes. They can reserve this room in advance and entertain up to twenty guests.

Users:

Residents
Visitors

Functional Relationships:

Main circulation
Lobby
Housing

ECS Requirements:

Natural lighting
Lighting control
Thermal control
Ventilation

Equipment:

Tables
Chairs

Utilized:

9am-11pm

Programmatic Requirements

Active Adult Community

Fitness Facility-Lobby

Description:

This area is for the residents before and after their workout. The primary activity is social gathering with others.

Users:

Residents

Functional Relationships:

Main circulation
Information desk

ECS Requirements:

Lighting control
Thermal control
Ventilation
Flexible design

Equipment:

Chairs
Tables

Utilized:

5am-10pm

Fitness Facility- Information desk

Description:

Upon arriving at the fitness center, members will have to check-in to gain access to the facility. The employees can check memberships and answer questions that residents may have about fitness programs or machine usage.

Users:

Residents

Functional Relationships:

Lobby
Lockerooms
Main circulation

ECS Requirements:

Lighting control
Thermal control

Equipment:

Desk
Computer

Utilized:

5am-10pm

Programmatic Requirements

Fitness Facility- Lockerooms M&W

Description:

This area provides personal lockers to the users of the fitness facility as well as showering and restroom facilities. The locker rooms serve each gender separately for relaxation and socializing.

Users:

Residents

Functional Relationships:

Information desk

ECS Requirements:

Thermal control
Lighting control
Ventilation

Equipment:

Lockers
Showers
Sinks
Toilets
Benches

Utilized:

5am-10pm

Fitness Facility- Free-weight Room

Description:

This room contains free-weights, strength training machines, and cardiovascular machines. Televisions are provided for entertainment while working out and for the use of exercise tapes. Good configuration of machines will promote optimal use.

Users:

Residents

Functional Relationships:

Aerobics room

ECS Requirements:

Lighting control
Thermal control
Ventilation
Flexible design

Equipment:

Free-weights
Storage for weights

Utilized:

5am-10pm

Programmatic Requirements

Active Adult Community

Fitness Facility- Aerobics Room

Description:

This room is separate from the free-weight room and is used for group aerobics. Televisions and music will be provided for entertainment while working out.

Users:

Residents

Functional Relationships:

Free-weights room

ECS Requirements:

Lighting control
Thermal control
Ventilation
Acoustics

Equipment:

N/A

Utilized:

5am-10pm

Housekeeping Storage

Description:

In this room, washers, dryers, and cleaning supplies are stored for housekeeping staff to utilize.

Users:

Employees

Functional Relationships:

Main circulation

ECS Requirements:

Lighting control
Thermal control
Ventilation

Equipment:

Washers
Dryers

Utilized:

8am-8pm

Programmatic Requirements

Active Adult Community

Courtyard/Rooftop Gardens

Description:

Courtyards and rooftop gardens are provided to promote activities, socialization, games, and gardening.

Users:

Residents
Visitors
Employees

Functional Relationships:

Housing
Activity center
Community center
Multi-purpose room

ECS Requirements:

Natural lighting

Equipment:

Seating

Utilized:

24-hours

Mechanical & Electrical Room

Description:

In this room, boilers, chillers, and hot water heaters will be located. Additionally, this space will contain all the electrical panels and equipment needed for the community. Space for two generators will also be provided to ensure that if the power fails then the building will not suffer.

Users:

Employees

Functional Relationships:

Main circulation

ECS Requirements:

Lighting control
Thermal control
Ventilation
Acoustics

Equipment:

Boilers
Chillers
Hot water heaters
Electrical equipment
Generators

Utilized:

24-hours

Programmatic Requirements

Active Adult Community

Elevator Equipment

Description:

This space contains any equipment needed to operate the elevators within the building.

Users:

Employees

Functional Relationships:

Main circulation

ECS Requirements:

Lighting control
Thermal control

Equipment:

Elevator equipment

Utilized:

24-hours

Yard Equipment & Maintenance Storage

Description:

This is the area where the maintenance staff will have room and equipment to repair minor damages within the building and grounds. It also serves as storage for yard equipment for outdoor maintenance such as lawn mowers and snow removal equipment.

Users:

Employees

Functional Relationships:

Main circulation

ECS Requirements:

Lighting control
Thermal control
Ventilation
Acoustics

Equipment:

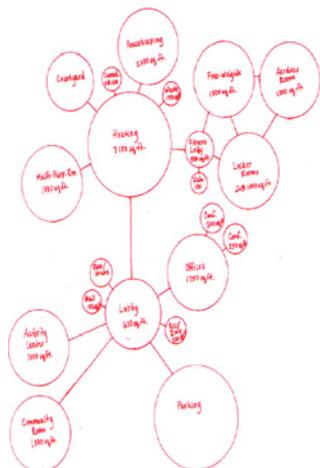
N/A

Utilized:

24-hours

PROCESS & DESIGN SOLUTION

Sketches & Notes



Quote
 "Stephen Alexander - 'Landscape considers get the sense to existing but about modern architecture.'"

Hospital Interior Architecture - Tim Malin
 Van Nostrand Reinhold @1998

- At age 20-40: People seek high possession experiences (first car, house, wife/husband, baby) to achieve satisfaction.
- At age 40-60: People seek high control experiences (great vacations, tickets to sporting events of the theater, great restaurants, fine hotels, & having others do their laundry, cut the grass, or cater a party) to achieve satisfaction.
- At age 60-80: People seek high being experiences (learning something new, helping a friend, watching a sunset, contributing time & money to a cause) to achieve life satisfaction.

People buy what the wind is to be, not what they are.
 Retirement communities that nurture self-esteem by providing many opportunities for residents to be productive & independent will give them a sense of empowerment & yield the maximum in life satisfaction.

Impaired Color vision: fade out of the color spectrum!
 = violets, blues & greens
 not much affected: red, orange & yellow



Quality of space

Optimizing - views, and walking & pedestrian movement

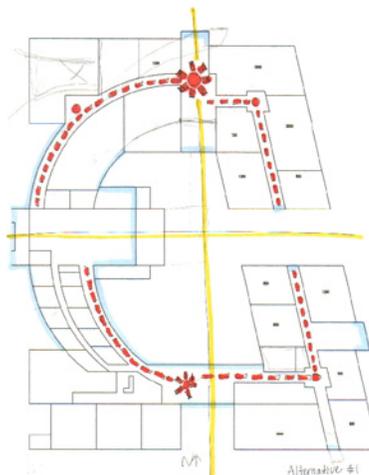
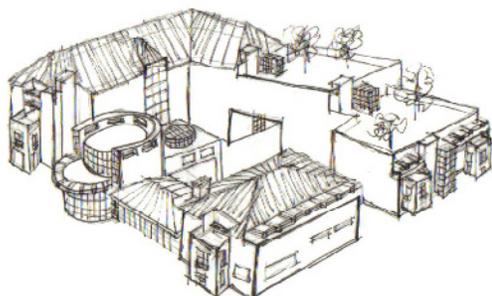
Water ways → Enhance the visual corridor to activity

Assisted Living Building → (shaded plaza over road)

Independent Living Building → Sun rich

Designed to have views to the river to provide residents or visitors of the activities taking place.

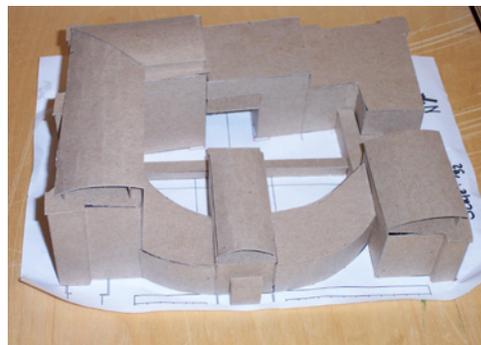
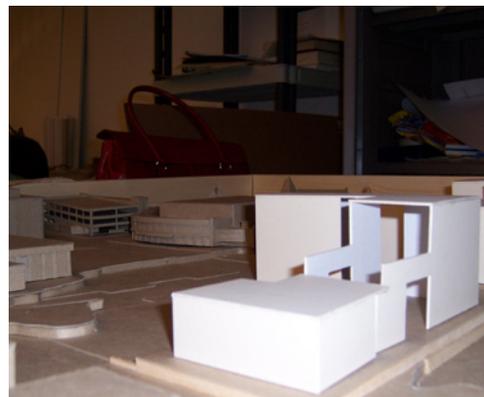
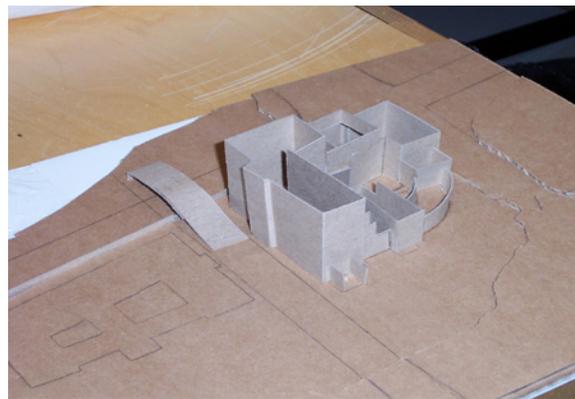
- Negative: No sun windows to south eastward of building layout
 Red roof garden & grazing



Process

Active Adult Community

Study Models



Design Solution

Active Adult Community

Final Presentation

Presentation set-up in the Union Ballroom



Final Models



Building in context

Partial building section



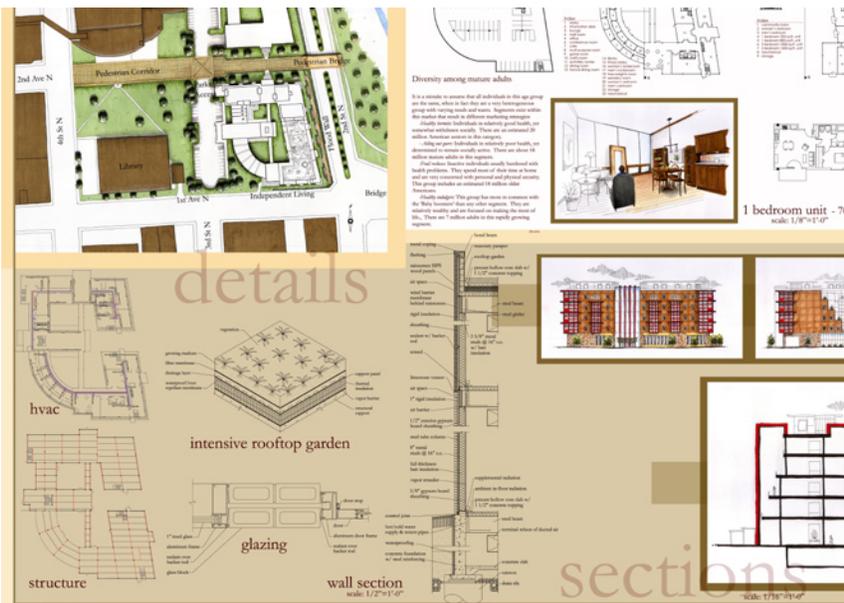
Design Solution

Active Adult Community

Final Boards



Boards were arranged to be one whole entity displaying site plan, site analysis, floor plans, details, elevations, sections, and perspectives.



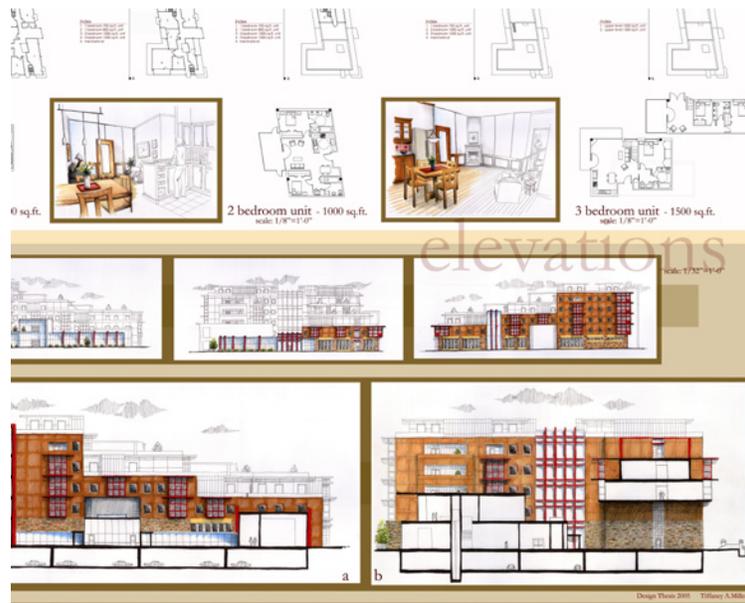
Design Solution

Active Adult Community

Final Boards



Boards were arranged to be one whole entity displaying site plan, site analysis, floor plans, details, elevations, sections, and perspectives.



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APPENDIX

Statement of Intent

Active Adult Community
Development of Independent Living and Retirement Community
Fargo, ND
Tiffany Miller

Fargo, ND has a rapidly growing population that demands housing for all individuals. But for many people age fifty-five and older, who live in the area, the idea of aging and leaving the neighborhood they call home to get the services they need is not something they are anxious to do. The “Baby Boomers” are an emerging generation of seniors, a large percentage of whom are expected to live well into their nineties. While some seniors will continue to live in the same house in which their children were raised, some will want or require a development company to provide alternative arrangements to the current housing solutions.

This thesis project will take into consideration the needs and desires of an aging but active adult community in downtown Fargo, whom desire a secure and interactive facility. The design will be oriented towards an active way of life while providing the privacy and freedom of independent living combined with the convenience and security of on-site assistance and a maintenance free environment. The community will provide seniors with qualities of services such as access to public transportation, exercise facilities, group activities, and on site recreational amenities. The project will follow green design principles in the development, construction process, and structure. Incorporating green building principles into the project will help seniors share environmental and sustainability goals, while creating a sense of place for the residents.

The intent is to learn the wants and desires of seniors and provide them with a secure facility, which will give them the opportunity to continue living an active, independent, fulfilling way of life. My desire is to use architectural forms and space planning to create a design solution that will allow seniors to continue their physical capabilities while enhancing and maintaining their intellectual capacities. The underlying premise of this design is that aging is a natural part of life and informs the solutions meant for people late in their life.

Proposal

Tiffany Miller
Architectural Thesis Proposal
October 7, 2004

A. Title

Active Adult Community in downtown Fargo, North Dakota.

B. Building Type

The building type will be residential condominiums for active adults in downtown Fargo.

C. Conceptual Basis or Unifying Idea

The unifying idea of this project is that aging is a natural part of life and it informs the solutions meant for people late in their life. The intent is to provide seniors with housing that promotes a healthy active intellect and community unity within itself and the city of Fargo.

D. Project Justification

Through this thesis project I want to address that Fargo has a growing population that demands housing for all individuals. But not everyone's needs can be met by moving into the sea of apartment complexes and bi-level homes spreading across the city. For the seniors that will want or require relocation, there are not a lot of options for them to move to an area that will promote and enhance their current levels of activity. As the population in Fargo increases so does the problem of urban sprawl, which takes away from the city strength of downtown. Developing in the downtown area will encourage a more diverse population along with creating a community driven ethic.

E. User/Client Description

The major users will be residents of Fargo and within the surrounding area that on average are over the age of 55, without bias to income or educational level. Additional users of this space may be friends and family of all ages that will occasionally visit the residents. The adult community will be owned by a development company and operated by a management company.

Personnel that may be required to allow the community to function as intended will be: maintenance (2), activities director (2), bookkeeping (2), receptionist (1), emergency care provider (1), and a fitness operator (1). The maintenance persons will be in charge of maintaining the grounds and conduct simple maintenance within the units. The activities directors will be in charge of coordinating group activities within the facility and linking them to the Fargo community. Two individuals will be responsible for bookkeeping, handling maintenance requests, and rent collection. One receptionist will be needed for visitors and questions. One emergency care provider in case there are any on site medical emergencies were they are needed to provide service or contact a hospital. One fitness specialist that can help residents in the fitness center with their questions or machine usage. Parking will be a concern among residents and visitors, however not all residents might require a parking spot since some may take public transportation, walk, or bike.

F. Major Project Elements

Activity center

Fitness facility

Storage

Housing

Circulation

Parking

Courtyard

Emergency care facility

Office

G. Site

Regional

Fargo, ND is part of The Great Plains region of the United States. This includes the states of Texas, Oklahoma, Kansas, Nebraska, North Dakota, South Dakota, New Mexico, Colorado, Wyoming, and Montana. The land in this region has a lot of variation. From the Black Hills in South Dakota, to the Badlands in North Dakota, to the Dunes of Nebraska and Colorado.

The climate of North Dakota is a cold climate. Long periods of time that are below the freezing point create a short growing season. North Dakota itself experiences hot summers and cold winters; even in summer the days are warm, but the nights are cool. The average maximum July temperature is 88 degrees and the average maximum January temperature is 26 degrees. On the average North Dakota receives 17" of precipitation per year. Low humidity, low perception, lots of wind, and plenty of sunshine. The state of North Dakota is bordered to the north by Canada, Minnesota to the east, South Dakota to the south, and Montana to the west.

City

Fargo is the largest city in North Dakota. It is 75 miles from Grand Forks and across the Red River of the North from Moorhead, Minnesota. Fargo itself is located on a fertile piece of farmland that developed out of the pre-historic lake bed.

Site

The specific site is located in downtown Fargo, bordered by 1st Ave N., 2nd St. N., 3rd Ave N., and 3rd St. N. It is in close proximity to the library, City Hall, and the Bus Depot.

The site was chosen to be in downtown to bring back the diverse spirit that downtown is trying to promote. The location is pedestrian friendly with walking paths near the Red River and is linked to other areas in the city through public transportation. The site will allow residents to experience the richness in the entertainment atmosphere that is captured in the heart of downtown.

H. Project Emphasis

The ultimate vision for this active adult community is an architecturally sustainable design that will create community unity and quality interaction, and promote a healthy intellectuality.

I. Research Direction

The areas of research that must be identified before designing are: site, economic base, demographics, transportation, and adult needs.

J. Design Methodology

In order to gain an understanding of what will be required to produce a successful project an analysis of case studies relevant to active adult communities and research of other related material will be obtained. That knowledge will lead to other areas that will need to be researched such as promotion of mental activities, building forms that contribute to unity, and so forth.

K. Documentation of the Design Process

All information relevant to the project such as interviews, case studies, and ideas will be recorded, noted, and organized weekly into a thesis binder.

L. Schedule

The following is a work plan schedule through both fall and spring semesters.

Fall Semester 2004

Week # 1 (Oct. 3-9)

7 October

Week #2 (Oct. 10-16)

14 October

Week #3 (Oct. 17-23)

21 October

Week #4 (Oct.24-30)

28 October

Week #5 (Oct.31-Nov.6)

Week #6 (Nov.7-13)

11 November

Week #7 (Nov.14-20)

Research
Thesis Proposal Due

Research
Students and Faculty Preference slips due

Research
Primary and Secondary Critics announced

Define Program
Research
Last Day of AR/LA 561 class

Further work on Program
Research

Work on Draft of Program
Organize Site Information
Veteran's Day Holiday

Work on Draft of Program

Appendix

Active Adult Community

Research

16 November	571 studio project presentations
15-19 November	Final week of AR/LA 571 Design Studio
Week #8 (Nov.21-27)	
24 November	Site Analysis
25-26 November	Draft Thesis Program due to Primary Critic
Week #9 (Nov.28-Dec.4)	Thanksgiving Holiday
Week #10 (Dec.5-11)	Organize Site Material
	Review with Primary for areas of refinement
	Work on Final Program Draft
9 December	Final Thesis Program due to Primary Critic
10 December	Last Day of classes
Week #11 (Dec.12-18)	
13-17 December	Final Exams
Week #12 (Dec.19-25)	
Week #13 (Dec.26-Jan.1)	Research
Week #14 (Jan.2-8)	Research
	Research
Spring Semester 2005	
Week #15 (Jan.9-15)	
11 January	Conceptual and Schematic Design Work
Week #16 (Jan.16-22)	Classes begin
17 January	Conceptual and Schematic Design Work
Week #17 (Jan.23-29)	Meet with primary/secondary
	Martin Luther King Jr. Holiday
Week #18 (Jan.30-Feb.5)	Conceptual and Schematic Design Work
	Meet with primary
Week #19 (Feb.6-12)	Conceptual and Schematic Design Work
	Meet with primary/secondary
Week #20 (Feb.13-19)	Conceptual and Schematic Design Work
	Meet with primary

Week #20 (Feb.13-19)	Design Development Meet with primary/secondary
Week #21 (Feb.20-26)	Design Development Meet with primary President's Day Holiday
21 February Week #22 (Feb.27-Mar.5)	Design Development Meet with primary/secondary
Week #23 (Mar.6-12)	Design Development Mid-Semester thesis reviews
7-11 March Week #24 (Mar.13-19)	Spring Break
14-18 March Week #25 (Mar.20-26)	Presentation Drawings Meet with primary Easter Holiday
25-28 March Week #26 (Mar.27-Apr.2)	Presentation Drawings
Week #27 (Apr.3-9)	Presentation Drawings
Week #28 (Apr.10-16)	Work on Final Presentation Material
Week #29 (Apr.17-23)	Thesis projects due at 4:30pm in Memorial Union Ballroom
25 April Week #30 (Apr.24-30)	Annual thesis exhibit in Memorial Union Ballroom
26-27 April 28 April- 5May 29 April	Final thesis review Draft of thesis document due to primary critics
Week #31 (May1-7)	Last Day of classes
6 May Week #32 (May 8-14)	Final exams Final thesis document due at 4:30pm in department office
9-13 May 12 May 13 May	Commencement

Appendix

Active Adult Community

M. Previous Design Studio Experience

2nd Year

Fall: Vince Hatlen

Space and Form Studies
Nativity Library

Nativity School library
Relocation

Spring: Milt Yergens

Lofty Intentions

Hidderdahl Church

New Hidderdahl Church
Lanchine Walking Bridge

Multi-Use Residential
Design
ADA Compliance
Addition
New Church Design
All School Design
Scharet

3rd Year

Fall: Mohamed Elnahas

NDSU Arboretum

Aging in Place

Learning and Research
Facility
Universal Residential
Design

Spring: Carol Prafcke

Children's Center for the Arts
Presbyterian Church

Children's Museum
Masonry Church Design

4th Year

Fall: Cindy Urness/Mark Barnhouse/Josh Walter

Urban Design

Downtown Fargo, ND

Spring: Darrell Booker

Mixed-Use Facility

High-Rise

Downtown
Moorhead, MN
San Francisco

5th Year

Fall: Jay Waroker
Olympic Scharet
U.S. Supreme Court Building

M. Bibliography/Resources

Thank You

Active Adult Community



Tiffany Miller
Hometown:

I would like to thank my family, friends, and professors that have helped and encouraged me over the years to reach this point in my life. Through hard work and determination I can finally say, "I made it."