# MEMORY AND HEALTH

LUKE SANDERS

# THESIS PROJECT ARCH 763 - 2021

## PROJECT TITLE AND SIGNATURE PAGE

A DESIGN THESIS SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE AND LANDSCAPE ARCHITECTURE OF NORTH DAKOTA STATE UNIVERSITY

ΒY

LUKE SANDERS

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARCHITECTURE

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# THESIS ABSTRACT

THROUGHOUT THE UNITED STATES LONG TERM CARE FACILITIES HAVE ONLY RECENTLY BEGAN USING DESIGN TO HELP THEIR RESIDENCES GAIN A BETTER STANDARD OF LIVING OR EVEN REGAIN SOME OF THEIR INDEPENDENCES BACK. THEY HAVE BEGUN GOING ABOUT THIS THROUGH BETTER DESIGN FROM DAYLIGHTING AND LAYOUT OF SPACES TO HELP THEIR RESIDENCES WITH DEMENTIA LIVE A BETTER LIFE.

THROUGH THIS PROJECT I WILL EXPAND ON THESE IDEAS BUT MAINLY FOCUSING ON HOW THESE IDEAS CAN BE IMPROVED AND UTILIZE TO HELP THOSE FACING DEMENTIA OR OTHER DISEASES THAT ARE AFFECTING MEMORY OR COGNITIVE FUNCTIONS. I WILL GO ABOUT THIS BY SEEING HOW DESIGN AND LAYOUTS CAN AFFECT THOSE WITH IMPAIRED COGNITIVE FUNCTIONS MAINTAIN OR REGAIN A MEASURE OF INDEPENDENCES WHILE MAINTAINING A NORMAL LEVEL OF LIVING.

# NARRATIVE OF THE THEORETICAL ASPECT OF THE THESIS

THROUGHOUT THE UNITED STATES THE POPULATION OF ADULTS REACHING 65 AND OLDER IS INCREASING GREATLY AND MORE CONCERNING THE AMOUNT OF THOSE ADULTS WITH DEMENTIA HAS SHOWN TO BE INCREASING WITH OLDER INDIVIDUALS AS SHOWN HERE. "IN 2002, THE PREVALENCE OF DEMENTIA AMONG INDIVIDUALS AGED 71 AND OLDER WAS 13.9% AND COMPRISED 3.4 MILLION INDIVIDUALS IN THE UNITED STATES (PLASSMANN ET AL., 2007). THE PREVALENCE INCREASES DRAMATICALLY WITH AGE: APPROXIMATELY 5% TO 8% OF INDIVIDUALS OVER THE AGE OF 65, 15% TO 20% OF INDIVIDUALS OVER THE AGE OF 75, AND 25% TO 50% OF INDIVIDUALS OVER THE AGE OF 85 YEARS ARE AFFECTED (KAWAS & KATZMAN, 1999)." (GESINE MARQUARDT, DR-ING, 2011). THIS SHOWS THE NEED FOR NOT ONLY MORE NURSING HOMES BUT ONES THAT ARE CREATED TO HELP THOSE WITH DEMENTIA KEEP THEIR INDEPENDENCE FOR AS LONG AS POSSIBLE.

SO, FOR THIS PROJECT I WILL BE TAKING ON THIS CHALLENGE AS WELL AS WHAT I FEEL ARE THE THREE MAJOR ASPECTS OF THIS PROBLEM. WHICH ARE ONES ABILITY TO ORIENTATION THEMSELF AND GET AROUND WHICH IS OF GREAT IMPORTANCE TO ONES QUALITY OF LIFE AS WITHOUT THIS ONE IS UNABLE TO TAKE CARE OF THEMSELF OR FIND THEIR WAY TO THEIR DESTINATION OR OUT OF A STRUCTURE DURING TIMES OF EMERGENCY. THIS ABILITY TO WAYFIND IS VERY HEAVILY DEPENDENT ON THE ARCHITECTURE OF THE STRUCTURE WHICH CAN BE SHOWN HERE. "THE MOST IMPORTANT ARCHITECTURAL INFORMATION FOR WAYFINDING IN PEOPLE WITH ALZHEIMER'S DISEASE COMPRISES THE IDENTIFICATION OF REFERENCE POINTS AND PLACES." (GESINE MARQUARDT, DR-ING, 2011). THIS QUOTE IS REFERRING TO HOW SPACE ORIENTATION AND CREATING DISTINCTIVE AND UNIQUE SPACE DRASTICALLY IMPROVES ONE'S ABILITY TO FIND THEIR WAY. WHICH IS DRASTICALLY IMPORTANT FOR THOSE WHO'S MENTAL CAPACITY FOR DISCERNING SUCH THINGS HAS DEGRADED

The first premise of the project also play heavily into the second premise of creating an area that residences can call their home. I say this from experience with my grandmother who has stayed in nursing homes before, where she has roommates and only a small area for a dresser for her personal belongings. By creating individual rooms where residents can live, decorate and be in without worrying of disturbing others. They will be able to relax and have something that is theirs instead of having to share everything. This will also help with their independence as they will be able to take care of the room as well as the room will act as a reference point for the residents to help them move about the facility with limited to no help. THE FINAL PREMISE THAT I WISH TO DISCUSS IN DETAIL WITHIN THIS PROJECT WOULD BE THAT OF NATURE AND LIGHT. AS BOTH ARE NECESSARY FOR A BETTER LIVING EXPERIENCE AS WELL AS CAN GREATLY HELP THOSE WITH DEMENTIA IN THEIR DAILY LIVES AS SHOWN HERE. "MOST IMPORTANT, SUFFICIENT LIGHTING HAS BEEN SHOWN TO BE A CENTRAL ASPECT OF A SUPPORTIVE ENVIRONMENT (NOELL-WAGGONER, 2002) AND TO HAVE A MAJOR INFLUENCE ON RESIDENTS' WAYFINDING ABILITIES: THE MORE LIGHT (BOTH ARTIFICIAL AND NATURAL) THERE IS IN A NURSING HOME, THE MORE RESIDENTS ARE ABLE TO FIND THEIR WAY AROUND (NETTEN, 1989)." (GESINE MARQUARDT, DR-ING, 2011). I WISH TO INCORPORATE THIS PREMISE AS WELL INTO THE DESIGN BECAUSE FROM MY EXPERIENCES MANY NURSING HOMES FEEL COLD AND CLINICAL IN NATURE WITH LARGE AMOUNTS OF HARSH LIGHTING. BY INTRODUCING MORE NATURAL LIGHT AND NATURAL SPACE AND ELEMENTS, I WOULD LIKE TO CREATE A SPACES THAT BOTH HELP RESIDENTS FEEL MORE COMFORTABLE, CREATE MORE REFERENCE POINTS TO HELP PEOPLE BETTER FIND THEIR WAY AND PROVIDE LIGHT TO BETTER HELP RESIDENTS AS WELL WITHOUT RELYING TOO HEAVILY ON HARSH ARTIFICIAL LIGHTS.

TO SUMMARIZE ALL OF THIS, I WISH TO CREATE A FACILITY THAT GIVES PEOPLE THE ABILITY TO HOLD ON TO THERE INDEPENDENCE FOR AS LONG AS THEY ARE ABLE TO AND TO PROVIDE THEM WITH AS BEST OF LIVING CONDITIONS AS I CAN, THROUGH THE USES OF ARCHITECTURE AND LANDSCAPING.

## PROJECT TYPOLOGY

THE TYPOLOGY FOR THIS PROJECT WILL BE THAT OF A LONG-TERM CARE FACILITY LOCATED ON THE SOUTHERN SIDE OF THE CITY OF GRAND FORKS ON THE NORTH DAKOTA SIDE OF THE RED RIVER.

THIS FACILITY WILL BE A ONE STORY STRUCTURE THAT ENCOMPASSES THE SITE. THIS STRUCTURE WILL HOUSE LIVING AREAS FOR THE RESIDENTS A SMALL CLINICAL ASPECTS AND A CHAPEL WITH OTHER SUPPORT AREAS FOR THE DAY TO DAY OPERATIONS OF THE FACILITY.

THE REASON FOR THIS TYPOLOGY BEING PICKED IS DUE TO HOW MANY OF THESE FACILITIES WITHIN NORTH DAKOTA ARE IN NEED OF MODERNIZATION TO BETTER HELP THEIR RESIDENTS.

# TYPOLOGICAL RESEARCH CASE STUDY 1: STONERIDGE CREEK



FIG:1 STONERIDGE CREEK EXTERIOR COURTYARD

#### INTRODUCTION

STONERIDGE CREEK HEALTH CENTER IS A NURSING HOME LOCATED IN PLEASANTON, CA. WHERE IT CATERS TO THOSE WHO NEED ASSIST IN DAILY NEEDS AS WELL AS IN MEMORY CARE. THE STRUCTURE IS 38,782 SF IN SIZE, WITH 40 SPERATE UNITS FOR RESIDENTS AND 75 TOTAL BEDS. THE STRUCTURE IS THREE STORIES TALL WITH THE MAJORITY OF THE STRUCTURE BEING TWO STORIES. AS FOR THE OTHER DEFINING CHARACTERISTICS OF THE STRUCTURE IS THAT IT HAS TWO INTERNAL COURT YARDS WITH SEVERAL WAYS INTO IT FROM DIFFERENT AREAS FROM THE FACILITY. THE FAÇADE USES A LARGE AMOUNT OF TILE AND TERRACOTTA ALONG WITH A DARKER COLOR PALETTE.

#### **PROJECTS ELEMENTS**

COURT YARDS, NURSING AREAS, MEMORY CARE UNITS, RESIDENTS ROOMS, KITCHENS, DINING AREA, ACTIVITY ROOMS, OFFICE SPACES, STORAGE, UTILITY SPACES.

#### **UNCOMMON ELEMENTS**

COURT YARDS, SIZE, AND NUMBER OF ROOMS

#### ENVIRONMENT

THIS STRUCTURE INTEGRATES WELL WITHIN ITS ENVIRONMENT VERY WELL WITH BOTH THE NATURAL AND BUILT ENVIRONMENT. WITH THE NATURAL ENVIRONMENT THE FACILITY UTILIZES A LARGE AMOUNT OF NATURAL PLANT LIFE AND UTILIZES IT TO CREATE WALKING PATHS AND SETTING AREAS FOR THE RESIDENTS AND NEIGHBORHOOD TO ENJOY. AS FOR THE BUILT ENVIRONMENT, THE STRUCTURE ALSO INTEGRATES INTO THE REST OF THE BUILT ENVIRONMENT BY UTILIZING MANY OF THE SAME MATERIALS AND COLOR PALLET WITHIN THE STRUCTURE AS WELL AS KEEPING ROUGHLY THE SAME SCALE OF THE SURROUNDING STRUCTURES.



FIG:2 Stoneridge Creek Exterior

#### SOCIALLY

THE FACILITY WAS VERY WELL RECEIVED BY ITS COMMUNITY AND ITS RESIDENTS. THE FACILITY HAS BECOME INTEGRAL TO THE NEIGHBORHOOD BY BECOMING A PLACE FOR RESIDENTS TO MEET WITHIN THE NEIGHBORHOOD BY USE OF WALKING TRAILS AND GARDEN AREAS OUTSIDE THE FACILITIES.

### CULTURALLY

CULTURALLY THE STRUCTURE MIRRORS THAT OF OTHER FACILITIES LIKE IT AS IT IMBODIES THE DESIGNS FOR SUCH FACILITIES TO OFFER A MORE HOME LIKE AMENITIES TO THE RESIDENTS OF SUCH FACILITIES.

#### LIGHT

THIS FACILITY UTILIZES A LARGE AMOUNT OF NATURAL LIGHT VERY WELL THROUGHOUT THE ENTIRETY OF THE STRUCTURE. EACH ROOM HAS A LARGE WINDOW THAT ALLOWS A GOOD AMOUNT OF LIGHT INTO EACH ROOM. AS WELL AS THE TWO INTERIOR COURT YARDS ALLOW FOR NATURAL LIGHT TO PENETRATE THROUGHOUT THE FACILITY ALLOWING FOR EXCELLENT NATURAL LIGHTING WITHIN THE FACILITY.

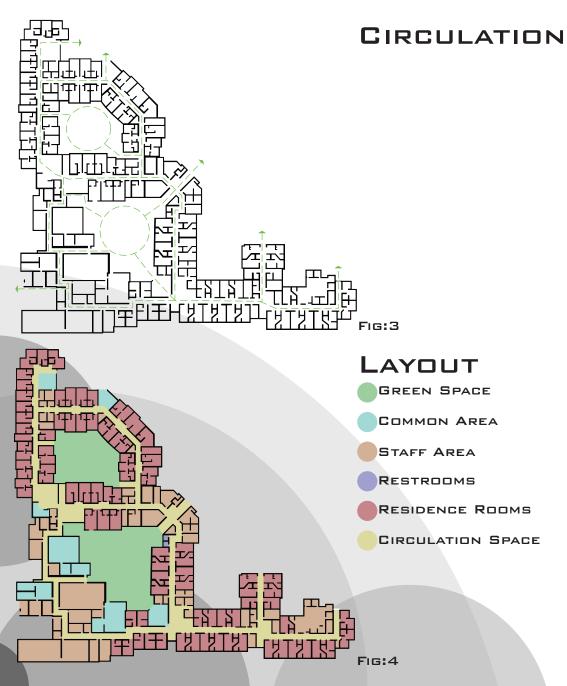
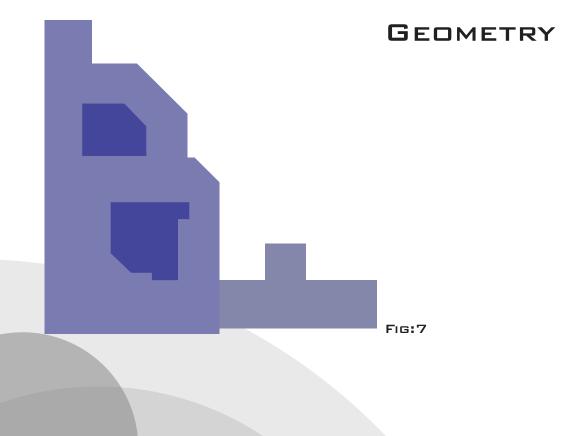


Fig:5

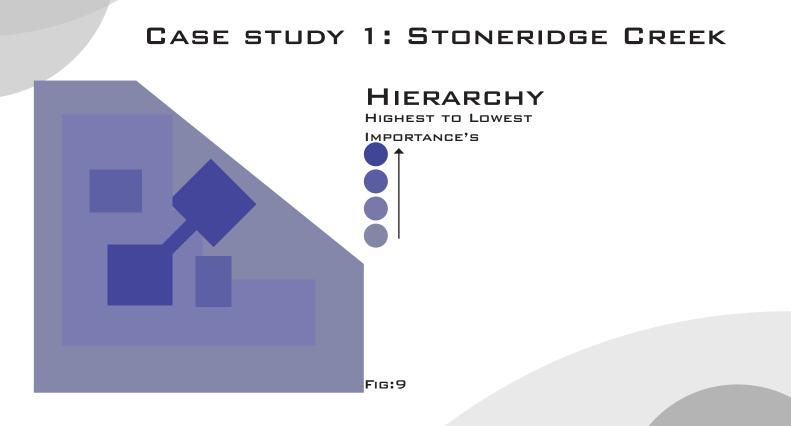
## MASS ELEVATION



## GEOMETRY ELEVATION

Fig:8

18



## CONCLUSION

IN CONCLUSION THIS CASE STUDY I FOUND FAIRLY INTERESTING. AS IT SEEMS TO SHOW THE CURRENT TREND IN LONG TERM CARE FACILITIES THAT IS HAPPING AS OF NOW. AS FOR WHAT THIS CASE STUDY HAS ADDED TO MY UNDERSTANDING OF MY THESIS QUESTION IN GENERAL IS THAT I SHOULD ENHANCES OR CREATE AS MANY POSSIBILITY'S AS POSSIBLE TO CONNECT RESIDENCES TO THE NATURAL ENVIRONMENT AROUND THEM WHILE CONTROLLING SAID ENVIRONMENT AS TO NOT PUT ANY RESIDENTS INTO UNDUE RISK. OVERALL, THIS CASE STUDY I FEEL WAS A GOOD BASE LINE AS TO WHAT LONG TERM CARE FACILITIES ARE STRIVING FOR AS OF NOW.

# TYPOLOGICAL RESEARCH Case Study 2: The Burnham Family Memory Care Residences at Avery Heights



FIG:10 THE BURNHAM FAMILY MEMORY CARE COMMON ROOM

# CASE STUDY 2: THE BURNHAM FAMILY MEMORY CARE

#### INTRODUCTION

THIS FACILITY IS LOCATED WITHIN HARTFORD CONNECTICUT. IT IS A RENOVATION OF A GROUND FLOOR WING OF THE LARGER AVERY HEIGHTS NURSING FACILITY, THE WING SPACE IN MEMORY CARE IS 10,000SF AND HOUSES 20 UNITS WITHIN AS FROM WHAT I CAN CONCLUDE FROM MY RESEARCH OF THE FACILITY EACH UNIT IS SINGLE OCCUPANCY. AS FOR SOME INTERESTING ASPECTS OF THE PROJECT IS THAT 25% OF THE SPACE IS DESIGNATED FOR DAY LIT ACTIVITIES AS WELL AS UTILIZES AN INDIRECT LIGHTING STEM FOR THE MAJORITY OF ITS ARTIFICIAL LIGHTS. THIS PROJECT HAS ALSO RECEIVED 7 SEPARATE AWARDS WHICH ARE BOSTON SOCIETY OF ARCHITECTS / AIA - HEALTHCARE FACILITIES DESIGN AWARD, CONTRACT MAGAZINE HEALTHCARE ENVIRONMENT AWARDS - LONG TERM MEMORY CARE, CREW CT BLUE RIBBON AWARDS - BEST IN CLASS - HEALTHCARE, IIDA NEW ENGLAND AWARD - BEST SENIOR LIVING, IIDA NEW ENGLAND AWARD - BEST IN CONNECTICUT, AIA NATIONAL DESIGN FOR AGING PUBLISHED PROJECT, AND IIDA HEALTHCARE AWARD - EXTENDED CARE & ASSISTED LIVING FACILITIES.

#### PROJECT ELEMENTS

NURSING AREA, RESIDENCES ROOMS, KITCHEN, DINING AREA, ACTIVITY ROOM, STORAGE, UTILITY SPACES, LAUNDRY AREA.

#### CASE STUDY 2:

#### THE BURNHAM FAMILY MEMORY CARE

#### UNCOMMON

COMMUNAL KITCHEN, INDIRECT LIGHTING

#### ENVIRONMENT

THIS FACILITY UTILIZES ITS ENVIRONMENT VERY WELL THROUGH ITS USE OF ITS ALLOTTED SPACES FOR ITS FACILITIES WITHIN THE EXISTING STRUCTURE TO MAXIMIZE THE COMFORT AND HEALTH OF ITS RESIDENTS AS WELL AS HOW IT CREATED TWO EXTERIOR SPACES THAT ALLOW RESIDENTS TO CONNECT WITH NATURE. THE FIRST SPACES ARE A PLAZA SEATING AREA THAT ALLOWS RESIDENTS TO CHAT AND ENJOY NICE WEATHER. THE SECOND SPACES ARE A SMALL GARDEN/WALKING PATH THAT ALLOWS RESIDENTS TO ENJOY THE NATURAL PLANT LIFE THERE AS WELL AS POSSIBLE BIRDS AND SMALL ANIMALS ATTRACTED TO THE AREA.

# CASE STUDY 2: THE BURNHAM FAMILY MEMORY CARE

## SOCIALLY

FROM WHAT I HAVE FOUND THIS STRUCTURE HAS BEEN DESIGNED TO CREATE AND ALLOW FOR RESIDENTS TO INTERACT WITH AND BE AROUND EACH OTHER, WHILE MAINTAIN AN AREA OF PRIVACY FOR EACH RESIDENT. AS FOR ITS CONNECTION TO THE REST OF THE FACILITY AND NEIGHBORHOOD, RESIDENTS FROM WHAT I COULD FIND HAS ROUGHLY THE SAME AMOUNT OF CONNECTIONS AS AN AVERAGE FACILITY OF ITS NATURE.

#### CULTURALLY

CULTURALLY THIS FACILITY I WOULD SAY OFFERS QUITE A BIT. IT HAS WON 3 ADA AWARDS, 2 AIA AWARDS, AND 2 OTHER AWARDS. ITS USES OF LIGHTING AND NATURAL ASPECTS SHOW WHAT MANY OF THESE FACILITIES SHOULD AIM TO ACHIEVE.

### CASE STUDY 2:

#### THE BURNHAM FAMILY MEMORY CARE

#### LIGHTING

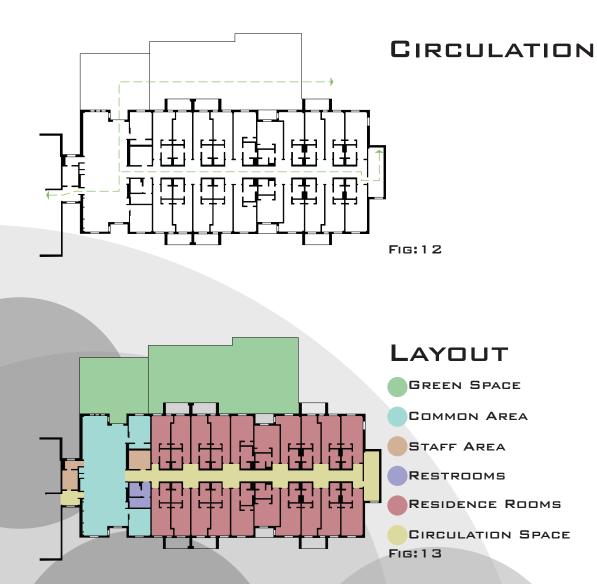
LIGHTING IS VERY WELL THOUGHT OUT AND IMPLEMENTED WITHIN THE DESIGN EACH ROOM IS DESIGNED TO MAXIMIZE NATURAL LIGHTING, THROUGH THE USES OF LARGE WINDOWS AND USE OF SHADING DEVICES. IT ALSO DOES A GREAT JOB WITH ITS ARTIFICIAL LIGHTING AS WELL BY BOUNCING THE LIGHT OFF OF ANOTHER SURFACES TO ALLOW THE LIGHT TO DISPERSE THROUGH OUT THE SPACES, WHILE CUTTING DOWN THE HARSHNESS OF ARTIFICIAL LIGHTS WHILE KEEPING LIGHT AT THE APPROPRIATE LEVELS.



FIG:11 THE BURNHAM FAMILY MEMORY CARE EXTERIOR

## CASE STUDY 2:

## THE BURNHAM FAMILY MEMORY CARE



## CASE STUDY 2: THE BURNHAM FAMILY MEMORY CARE



MASS

Fig:14

## MASS ELEVATION

# CASE STUDY 2: THE BURNHAM FAMILY MEMORY CARE



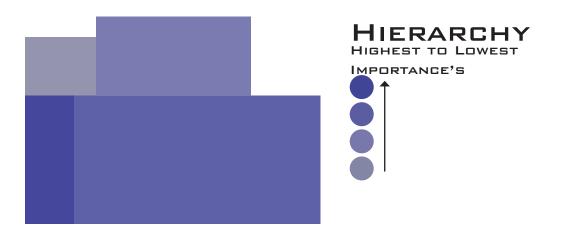
#### GEOMETRY

FIG:16

# GEOMETRY ELEVATION

## CASE STUDY 2:

## THE BURNHAM FAMILY MEMORY CARE



# CASE STUDY 2: The Burnham Family Memory Care

## CONCLUSION

OVERALL, I HAVE FOUND THIS PROJECT VERY HELPFUL IN THE AREAS ABOUT LIGHTING AND HOW TO APPROACH BOTH NATURAL LIGHTING AS WELL AS ARTIFICIAL LIGHTING AND POSSIBLE SOLUTIONS FOR THESE PROBLEMS. THIS PROJECT HAS ALSO SHOWN ME A FEW WAYS FOR HOW TO GROUP SPACES AND SIZING OF CERTAIN SPACES FOR MY OWN FACILITY. THIS PROJECT ALSO CONTINUED TO REINFORCE THE IDEAS OF NATURAL ELEMENTS, SAFETY OF THE RESIDENCES AS WELL AS SINGLE OCCUPANTS' ROOMS FOR RESIDENTS.

# TYPOLOGICAL RESEARCH CASE STUDY 3: PARKSIDE RETIREMENT HOMES



FIG: 19 PARKSIDE RETIREMENT HOMES ATRIUM

#### INTRODUCTION

THIS PROJECT IS A RETIREMENT HOME LOW RISE. THE PROJECT IS LOCATED IN BANGALORE, INDIA CLOSE TO THE AIRPORT AND COMMERCIAL DISTRICT. THE FACILITY IS GATED AND IS 3,000,000SF WITH 156 UNITS IN TOTAL. EACH OF THESE UNITS IS AN INDIVIDUAL APARTMENT. SOME NOTABLE CHARACTERISTICS OF THE STRUCTURE IS THAT OF AN ATRIUM THAT OPENS THE INTERIOR OF THE STRUCTURE TO THE OUTSIDE. SEVERAL OTHER MAJOR ASPECTS ARE THAT OF THE FAÇADE WHICH IS VERY DISTINCTIVE WITH ITS USE OF SHAPES AND COLOR. THE FINAL MAJOR CHARACTERISTICS OF THE STRUCTURE IS THAT IT INCORPORATES AN EXISTING TEMPLE INTO ITS DESIGN AND LAYOUT.

#### **PROJECT ELEMENTS**

TEMPLE, APARTMENTS, COMMUNITY CENTERS AND ACTIVITY ROOMS, ATRIUM, OPEN AIR PLAZA ON MAIN LEVEL.

#### UNCOMMON

MULTIPLE ACTIVITY ROOMS, NUMBER OF FLOORS, FAÇADE, OPEN AIR PLAZA

## ENVIRONMENT

THIS PROJECT INTEGRATES WELL WITH THE SURROUNDING BUILT ENVIRONMENT THROUGH BEING DISTINCTIVE BUT ALSO WORKING WITH MANY OF THE NEIGHBORING STRUCTURE. IT ALSO WORKS WELL WITH ITS SITE BY PRESERVING THE TEMPLE LOCATED ON THE SITE BY MOVING AROUND THE TEMPLE WHILE INCORPORATING IT INTO THE MAIN PLAZA AREA. THIS PROJECT DOES SEEM TO FALL SHORT THROUGH ON THE NATURAL ASPECT OF THE ENVIRONMENT AS FROM THE IMAGES THAT I FOUND IT LOOKS AS IF THE AREAS NOT WITHIN PLANTERS WHERE LEFT TO GROW UNTENDED WITH LARGE AMOUNT OF OVER GROWTH AND WEEDS

WITH IN THEM.



FIG:20 PARKSIDE RETIREMENT HOMES EXTERIOR

## SOCIALLY

I COULD NOT FIND A LARGE AMOUNT OF INFORMATION ON HOW THE PROJECT WORKS SOCIALLY. FROM WHAT I COULD FIND THE RESIDENTS OF THE STRUCTURE FIND IT TO BE VERY WELCOMING AND THE FACILITY SEEMS TO HAVE INTEGRATED SURROUNDING NEIGHBORHOOD.

#### CULTURE

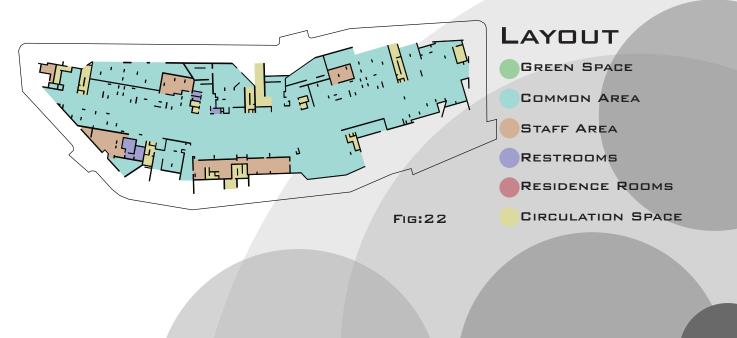
THIS FACILITY MAIN POINTS THAT IT DOES CULTURE IS THROUGH THE CREATION OF A COMMUNITY FOR ITS RESIDENTS AS WELL AS THE PRESERVATION OF A LOCAL RELIGIOUS SITE ON THE PROPERTY.

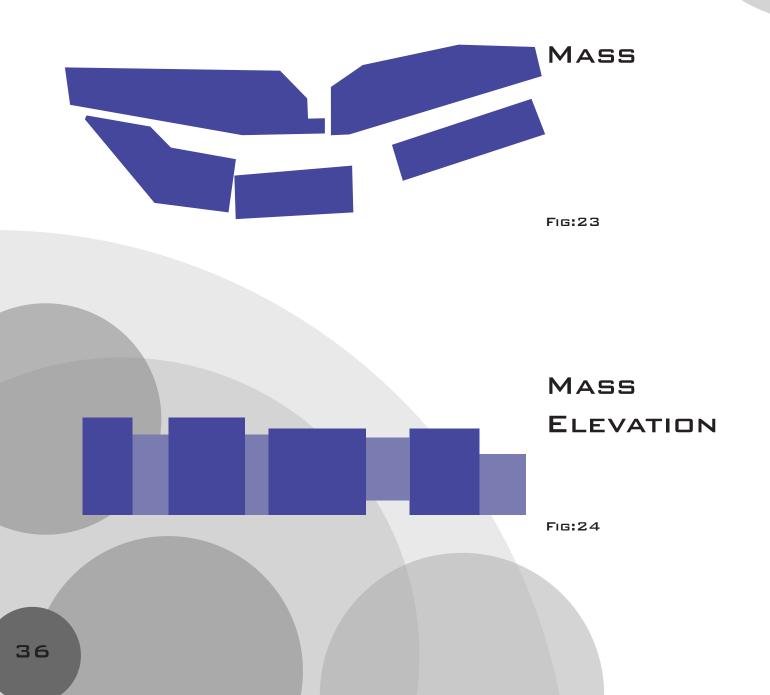
#### LIGHTING

OVERALL LIGHTING WITHIN THE ATRIUM AND CENTRAL GATHERING AREAS IS VERY WELL DONE. WITH A LARGE AMOUNT OF NATURAL LIGHT AS WELL AS THE FORM OF THE BUILDING IS USED TO BOTH BRING IN MORE NATURAL LIGHT AS WELL AS FUNCTION AS A SHADING DEVICE DURING THE HOTTEST TIMES OF THE DAY.

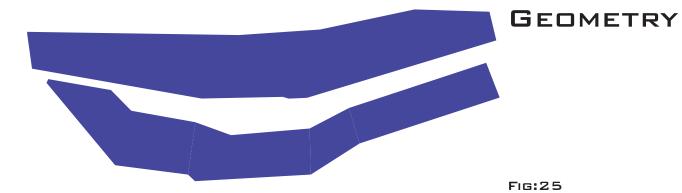


## CIRCULATION





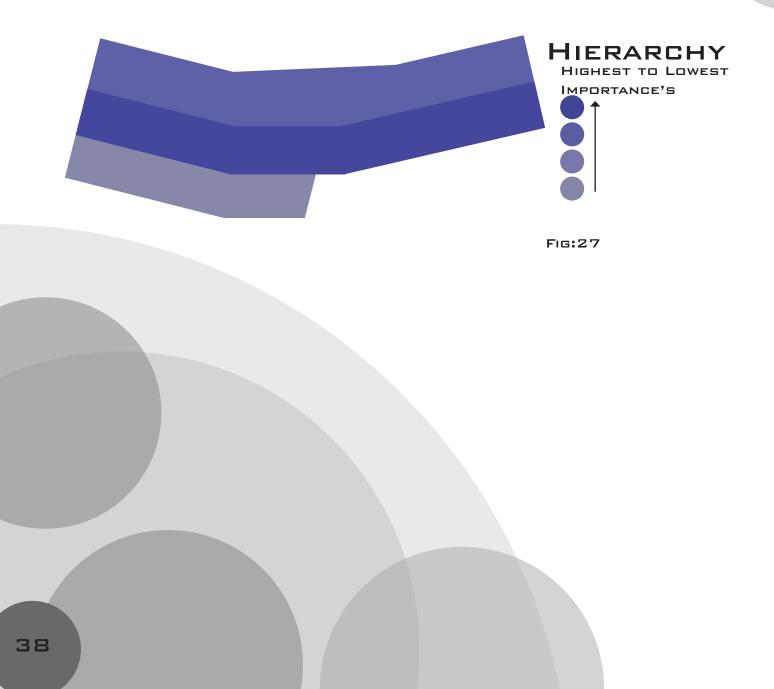
## CASE STUDY 3: PARKSIDE RETIREMENT HOMES



GEOMETRY ELEVATION

FIG:26

## CASE STUDY 3: PARKSIDE RETIREMENT HOMES



### CASE STUDY 3: PARKSIDE RETIREMENT HOMES

### CONCLUSION

OVERALL, THIS PROJECT CONTINUES TO REINFORCE THE ASPECTS OF LARGE AMOUNTS OF NATURAL DAY LIGHT AND BRING NATURE WITHIN THE STRUCTURE. THIS PROJECT ALSO CONTINUES TO REINFORCE THE USE OF LARGE COMMUNAL AREAS FOR RESIDENTS TO GATHER AND INTERACT WITH EACH OTHER. WHILE BRINGING TO LIGHT HOW MASSES AND STRUCTURE MAY BE USED TO DO THAT.

## TYPOLOGICAL RESEARCH Case study 4: Scheffau Amwilden Karser



FIG:28 SCHEFFAU AMWILDEN KARSER ATRIUM

## CASE STUDY 4:SCHEFFAU AMWILDEN KARSER

### INTRODUCTION

THIS PROJECT IS LOCATED WITHIN SCHEFFAU, AUSTRIA WHERE IN IT FUNCTIONS AS A NURSING HOME. THE STRUCTURE IS 5120MSQ WITH 54 UNITS. THE STRUCTURE IS 3 STORIES TALL AND UTILIZES A LARGE AMOUNT OF WOOD WITHIN ITS INTERIOR FAÇADE AS WELL AS WITHIN ITS SHADING DEVICE. THE STRUCTURE ALSO UTILIZES AN INTERIOR ATRIUM AND EXTERIOR PLAZAS.

### **PROJECT ELEMENTS**

KITCHEN, NURSE STATIONS, RESTROOMS, ATRIUMS, RESIDENTS ROOMS, DINING ROOM, UTILITIES ROOM, RECREATION ROOMS, OFFICE SPACE, PLAZA, STORAGE

## CASE STUDY 4: SCHEFFAU AMWILDEN Karser

### UNCOMMON

USE OF WOOD SCREEN AND IT ITS INTERLOCKING MASS.

### ENVIRONMENT

THE FACILITY IS INTEGRATED VERY WELL WITH IN ITS ENVIRONMENT. THE STRUCTURE ITSELF IS PARTIALLY WITHIN A HILL. ITS FORM AND MASS ARE VERY CONTRASTING TO THE ENVIRONMENT BUT STILL FITS WITHIN IT. AS FOR HOW IT CONNECTS TO THE BUILD ENVIRONMENT IS VERY MUCH THE SAME AS THE NATURAL ENVIRONMENT WHERE THE STRUCTURE IS VERY DIFFERENT THAN THE SURROUNDING STRUCTURES BUT MAINTAIN THE SAME SCALE AND BY USING MANY OF THE SAME MATERIALS THAT ARE FOUND THROUGH OUT THE TOWN.



## CASE STUDY 4: SCHEFFAU AMWILDEN KARSER

### SOCIALLY

THIS FACILITY WAS VERY WELL LIKED BY THE COMMUNITY AS A WHOLE AND HAS BECOME A DESTINATION WITHIN THE COMMUNITY. WITH THE RESIDENTS HAVING GREAT ACCESS TO THE REST OF THE COMMUNITY AND BEING A PARTICIPANT WITHIN THE COMMUNITY.

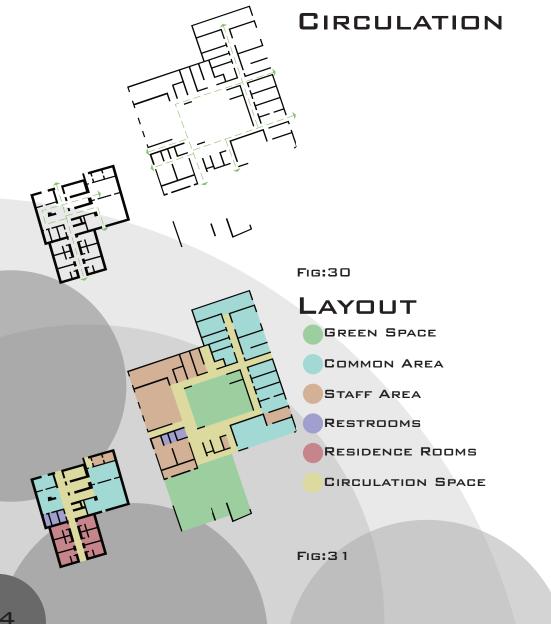
### CULTURALLY

THIS FACILITY INTERACTS CULTURALLY WITHIN THE COMMUNITY THROUGH ITS DESIGN LAY OUTS AND MATERIALS USED THROUGH OUT ITS DESIGN AND LAYOUTS.

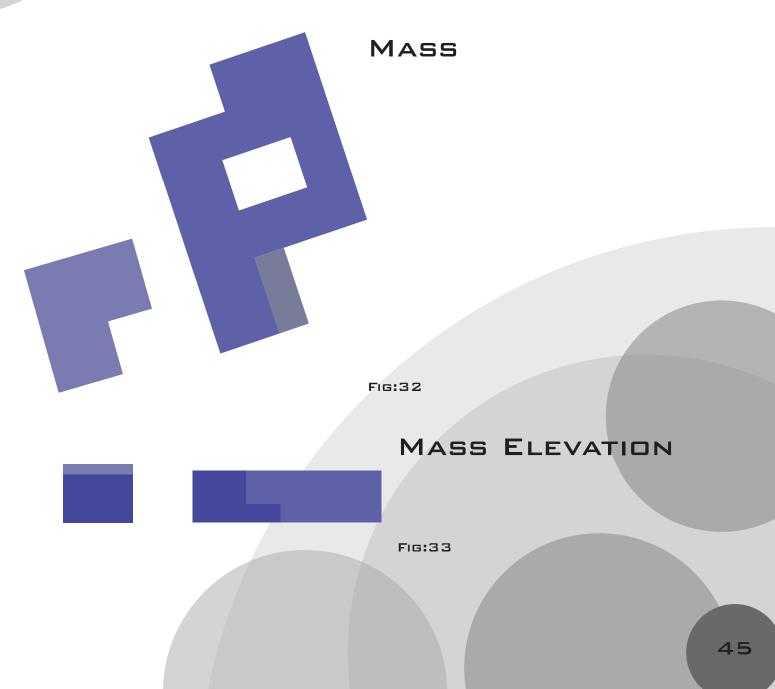
### LIGHTING

THE LIGHTING WITHIN THE INDIVIDUAL ROOMS IS VERY WELL DONE THROUGH THE USES OF LARGE WINDOWS AND SHADING DEVICES ALLOWING FOR EXTENT CONTROL OF LIGHT WITH INDUVIAL ROOMS. THE INTERIOR IS ALSO VERY WELL LIT WITH NATURAL LIGHT THROUGH THE USE OF THE ATRIUM EVEN THOUGH FROM SOME OF THE IMAGES THAT I HAVE SEEN THE INTERIOR SEEMS TO GET SOME WHAT DARK DURING THE WINTER THOUGH THIS IS DUE TO SNOW BUILD UP ON THE GLASS ROOF OF THE ATRIUM AS FAR AS I CAN TELL.

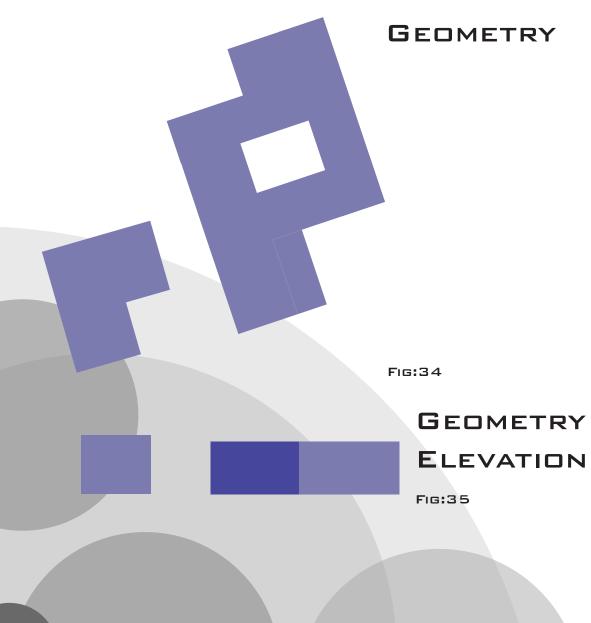
## CASE STUDY 4: SCHEFFAU AMWILDEN Karser



## CASE STUDY 4: SCHEFFAU AMWILDEN KARSER



## CASE STUDY 4: SCHEFFAU AMWILDEN KARSER



### CASE STUDY 4: SCHEFFAU AMWILDEN

HIGHEST TO LOWEST

IMPORTANCE'S

KARSER

FIG:36

## CASE STUDY 4: SCHEFFAU AMWILDEN Karser

### CONCLUSION

OVERALL, THIS PROJECT SHARES MANY CHARACTERISTICS OF THE OTHER PROJECTS THAT HAVE BEEN DISCUSSED SUCH AS THE USE OF NATURAL LIGHT AND OPEN INTERIORS IN THE FORM OF AN ATRIUM. BUT IT ALSO SHOWS HOW MATERIAL USES AND SHADING DEVICE CAN BE USED VERY EFFECTUALLY WHILE BEING RELATIVELY SIMPLE.

# TYPOLOGICAL RESEARCH CONCLUSION

### SUMMARY

To tie these 4 case studies together into one cohesive package I will first QUICKLY DESCRIBE THEM AS A WHOLE. I CHOSE EACH OF THESE CASE STUDIES DUE TO THE DIFFERENCE IN SIZE FROM 20 UNITS TO OVER 100 UNITS. I DID THIS TO SEE WHAT CARRIED OVER FROM FACILITIES OF DIFFERENT SIZES. I ALSO CHOSE THESE CASE STUDIES BASED ON LOCATION AND CULTURE WITH ONE FROM EACH COAST IN THE UNITED STATES AS WELL AS ONE FROM INDIA AND ONE FROM AUSTRIA, THE REASON BEHIND THIS WAS DUE TO TRYING AGAIN TO SEE IF THERE WAS ANY CHANGE CULTURAL AND REGIONALLY THAT WOULD AFFECT THE FACILITY AS WELL AS TO SEE WHAT WAS CONSISTENT IN SUCH FACILITIES AROUND THE WORLD. FINALLY, THESE 4 CASE STUDIES WERE CHOSEN DUE TO HOW THEY PROVIDE MYSELF THE MOST INFORMATION REGARDING THEIR DESIGN AND LAYOUT. AS FOR HOW THESE CASE STUDIES AFFECT MY THEORETICAL PREMISE AS WELL AS THE UNIFYING IDEA, THESE CASE STUDIES DID AFFECT BOTH OF THESE QUITE A BIT. THE FIRST ASPECT THAT IT AFFECTED WAS THROUGH THE USE OF ATRIUMS WITHIN MANY OF THESE STRUCTURES WHICH I WAS NOT PLANNING ON. BUT THIS DID HELP REINFORCE THE IDEA TO BRING IN AS MUCH NATURAL LIGHT AS POSSIBLE AS WELL AS TRY TO CONNECT THE RESIDENTS TO NATURE AS MUCH AS POSSIBLE. THESE TWO IDEAS I HAD THOUGHT OF, BUT THESE CASE STUDIES DID REINFORCE THE IMPORTANCE OF SUCH ASPECTS OF THE IDEA, ANOTHER PORTION OF THE IDEA THAT THESE CASE STUDIES HAD INFLUENCE GREATLY WAS THAT OF THE USE OF WARM COLORS IN MATERIAL THROUGHOUT THESE CASE STUDIES. I NOTICED THAT MANY OF THE INTERIORS WERE VERY HOMELIKE WITH THEIR USE OF MATERIALS AND COLORS WHILE ALSO BEING VERY DISTINCTIVE IN WHAT THEY WERE TO HELP RESIDENTS DISTINGUISH DIFFERENT AREAS AND ASPECTS OF THE FACILITY. THIS SHOWED IN PRACTICES WHAT I HAVE READ DURING RESEARCH WHILE ALSO SHOWING ME SEVERAL WAYS AND APPROACHES TO GO ABOUT THIS. OVERALL, THESE CASE STUDIES HELPED ME A GREAT DEAL WHICH I WILL GO INTO MORE DETAIL BELOW.

### **COMMON CHARACTERISTICS**

THERE WAS A GREAT DEAL OF COMMON CHARACTERISTICS ABOUT THESE CASE STUDIES. THE FIRST WAS SIZE ALL BUT ONE DID NOT EXCEED 3 STORIES WHILE ALL HAD AREAS THAT ALLOWED FOR SEAMLESS TRANSITIONS FROM INTERIOR TO EXTERIOR TO ALLOW FOR RESIDENTS TO ENJOY NATURE. THESE FACILITIES ALSO SHARED MANY SIMILAR SPACES AND SPACE SIZES, SUCH AS RESIDENTS ROOMS, MAINTENANCE FACILITIES, COMMON ROOMS, KITCHENS, MEDICAL ROOMS, ADMINISTERING SPACES, STORAGE, AND OUTDOOR SPACE, AND FINALLY ATRIUMS WHICH I FOUND INTERESTING TO BE FOUND IN MANY SUCH FACILITIES EVEN OUTSIDE THE TWO SHOWN HERE WITH THEM. ANOTHER ASPECT THAT WAS UNIVERSAL WAS THE USE OF NATURAL LIGHT WHEREVER POSSIBLE AND THE USE OF SIMPLE LAY OUTS WITH A LARGE NUMBER OF STRAIT CORRIDORS WITH A SMALL AMOUNT OF CHANGES IN DIRECTIONS. OVERALL, MANY OF THESE FACILITIES EVEN ACROSS NATIONS SHARE MANY OF THE SAME CORE CONCEPTS.

### **UNCOMMON CHARACTERISTICS**

Overall, there was not a lot of uncommon characteristics. Most of these were actually how the common characteristics were implanted such as how one case study had a communal kitchen while one had sperate private kitchens and the other two had kitchens staffed by facility staff and residents were not allowed to use them. The other aspect of this that came up was that of common rooms where some facilities had multiple smaller facilities and others had fewer larger ones. The only other major differences were the use of materials where some used a larger pallet of contrasting / distinctive materials and colors, then others used smaller palettes and utilizes more of the sharper change in material or in color. Overall, there was less uncommon aspects then common ones.

### EFFECT OF SITE, CULTURAL, POLITICAL, OR SOCIAL CONTEXTS ON THE PROJECT.

THE SITE HAD A GREAT AFFECT ON ALL OF THESE PROJECTS AND ITS MAIN CONTRIBUTION WAS HOW MUCH GREEN SPACE AND NATURAL ELEMENTS THEY WERE ABLE TO BRING INTO THE FACILITY. SUCH AS THE SITE IN INDIA AND HARFORD WHERE THE SITE WAS LIMITED THESE FACILITIES EITHER HAD TO CUT IT OUT OF THE MASS OF THE STRUCTURE CREATING AND ATRIUM OR DESIGN WHAT SPACES THEY HAD TO ALLOW THEM TO MAXIMIZE THEIR USES OF IT. WHILE OTHER ONES WHERE ALLOWED TO CREATE A MORE SPRAWLING EXPANSE OF GREEN SPACE FOR THEIR RESIDENTS, AS FOR CULTURAL AND SOCIAL ASPECTS EACH FACILITY DEPENDING WHERE THEY WERE HAD DIFFERENT RESPONSES. SUCH AS THE FACILITY IN AUSTRIA HAD VERY SPARTAN LIKE ROOMS BUT HAD A VERY PRONOUNCED CONNECTION TO OTHER RESIDENCIES AND THE COMMUNITY AS A WHOLE WITH MANY AREAS FOR INTERACTIONS. THIS SEEMS TO ALSO BE THE CASE OF THE FACILITY IN INDIA BUT WITH A MORE FOCUSED FEW ON THE RESIDENTS OF THE FACILITY, WHILE THE FACILITIES WITHIN THE UNITED STATES SEEMED TO HAVE A MORE APARTMENT STYLE UNITS BUT ALSO AND LESS SOCIAL CONNECTIONS THEY WERE THERE AND A MAJOR ASPECT BUT IT SEEMED TO HAVE AN EXTRA LAYER OF SEPARATION TO IT.

# SPATIAL, FUNCTIONAL, AND TECHNICAL

AS FOR THESE ASPECTS OF THE CASE STUDIES ALL THE FACILITIES SEEMED TO BE FAIRLY SIMILAR IN NATURE. WHERE RESIDENTS UNITS WERE ALWAYS GROUPED TOGETHER INTO GROUPS OF SEVERAL UNITS ALONG WITH A NURSING STATION AND AN OFFICE UNIT AND STORAGE AREA NEARBY. THESE GROUPING WERE THEN PLACED TOGETHER AND CONNECTED UP TO MAJOR CIRCULATION ASPECTS SUCH AS THE MAIN RECEPTION AREA AND ELEVATORS / STAIR WELLS, EXTERIOR AREAS SUCH AS COURTYARDS OR ATRIUMS, AS WELL AS COMMON ROOMS, THERAPY ROOMS, AND DINING AREAS, AFTER THESE AREAS CAME MORE SUPPORT SPACE WHICH WERE EVEN FARTHER DETACHED FROM THE RESIDENTS THESE SPACES CONSISTED OF ADMIRATION SPACES, KITCHENS, MEDICAL STORAGE, STAFF FACILITIES. THE FINAL SET OF SPACES WERE COMPLETELY DISCONNECTED FROM THE RESIDENTS AND THESE FACILITIES CONSISTED OF MECHANICAL SPACES, STORAGE, LOADING DOCKS AND SECURITY FACILITIES, AS FOR POSSIBLE TECHNICAL ISSUES THAT THESE MAY CAUSE IS THAT I NOTICED THAT SOME OF THESE STORAGE AREAS COULD BE VERY EASILY ACCESSED BY RESIDENTS AS WELL AS SOME OF THE EXTERIOR SPACES COME CLOSE OR BUTT UP TO SUPPORT FACILITIES SUCH AS LOADING AREAS. BUT OTHER THAN THOSE TWO I COULD NOT FIND ANY OTHER POSSIBLE TECHNICAL ISSUES THOUGH I AM SURE THERE ARE SOME.

## EFFECT ON CONCEPTUAL IDEAS ON THE THEORETICAL PREMISES OR IDEA

As for the overall effect that these case study has had on my theoretical premise and idea. I would say that they have helped a lot in my understanding of it as well as showing possible solutions at I could scale up to meet the problem that I am trying to answer through my own design. I say this due to each of these case studies seems to bring aspects that I was looking for such as creating a more comfortable spaces for residences and how to uses design to better help those residence with that and each of these case study shows a different approach and aspect of that problem.

## MAJOR PROJECT ELEMENTS

APARTMENT STYLE ROOMS: THESE ROOMS ARE TO BE DESIGNED TO FUNCTION AS FULL APARTMENTS TO KEEP RESIDENTS SENSE OF INDEPENDENCE WITH FACILITIES TO HELP WITH DAY TO DAY LIVING.

BREAKROOM: SPACE FOR STAFF TO KEEP BELONGINGS AND REST WHILE ON BREAK.

CHAPEL: A NON DOMINATION CHAPEL FOR SPIRITUAL NEEDS OF RESIDENTS.

DINING AREA: THESE WILL BE LARGE AREAS THAT WILL FUNCTION AS A CAFETERIA AS WELL AS A GATHERING AND SOCIAL AREA.

KITCHEN: THESE ARE COMMERCIAL KITCHENS THAT WOULD PROVIDE MEALS TO THE RESIDENTS.

LOADING AREA: THESE AREAS WILL BE LOCATED IN THE SERVICES AREAS AND ARE USED FOR OFFLOADING SUPPLIES.

NURSE STATION: THESE AREAS FOR NURSES TO FILE REPORTS AND COORDINATE WITH OTHERS TO PROVIDE FOR THE RESIDENTS.

**DXYGEN STORAGE: SPECIALIZED STORAGE AREA FOR OXYGEN TANKS.** 

### MAJOR PROJECT ELEMENTS

OFFICES SPACE: SPACES USED BY STAFF FOR ADMINISTRATION PURPOSES.

PATIOS: OUTDOOR AREAS FOR RESIDENTS TO GATHER AND SOCIALIZE WITH EACH OTHER.

PHARMACEUTICAL STORAGE: SPECIALIZED STORAGE FOR MEDICAL EQUIPMENT AND MEDICATION.

RESTROOM: RESTROOMS FOR STAFF AND PUBLIC USE FOR VISITORS.

RECEPTION STATION: AREA FOR VISITORS TO CHECK IN AT.

SANITATION ROOMS: SPECIALIZED ROOMS FOR SANITIZING MEDICAL EQUIPMENT FOR MEDICAL USE AS WELL AS STORAGE FOR CLEANING EQUIPMENT FOR ROOMS.

STORAGE: STORAGE AREAS FOR EQUIPMENT OR OTHER SUPPLIES.

SOCIAL AREAS: GATHERING AREAS FOR RESIDENTS TO GATHER IN THE FORM OF SITTING AREAS, LIBRARIES, OUTDOOR SPACES.

THERAPY ROOMS: ROOMS FOR PHYSICAL AND MENTAL THERAPY FOR RESIDENTS.

## **CLIENT DESCRIPTION**

RESIDENTS: THEY WILL REQUIRE COMFORTABLE LIVING ACCOMMODATIONS, SOCIAL AREAS, THEIR MEDICAL NEEDS COVERED, EASE OF MOVEMENT AROUND THE PREMISES, AND ACCESS TO THE REST OF THE NEIGHBORHOOD.

STAFF: STAFF WILL REQUIRE OFFICE SPACE, TECHNICAL ROOMS TO PROVIDE CARE TO RESIDENTS, SECURE AREA FOR BELONGINGS, AND BREAKROOMS.

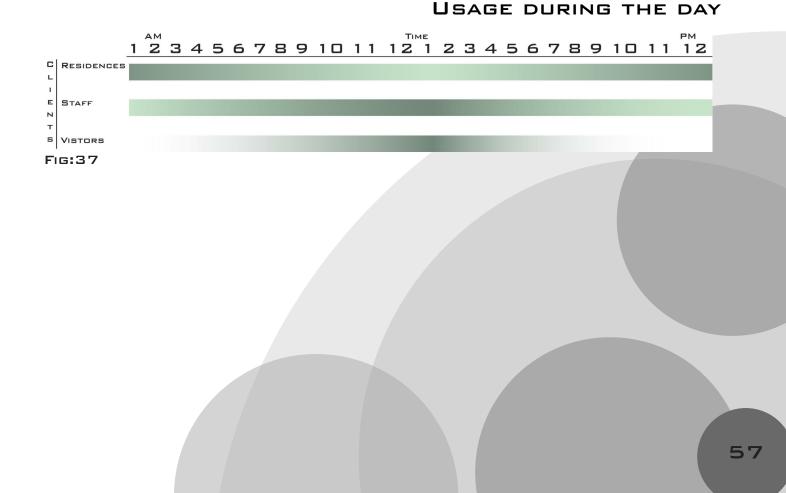
RESIDENTS FAMILIES: FAMILIES WILL NEED AN AREA TO CHECK IN AT, AS WELL AS AREAS TO GATHER WITH RESIDENTS PRIVATELY, EASE OF NAVIGATION OF THE FACILITY, AND AREAS TO TALK TO STAFF ABOUT RESIDENTS.

OWNER/FACILITY MANGER: THEY WILL REQUIRE OFFICES SPACE TO RUN ADMINISTRATION ASPECTS OF THE FACILITY, SPACE TO MEET WITH RESIDENTS, FAMILIES, AND STAFF.

## **CLIENT DESCRIPTION**

### PARKING REQUIREMENTS

FOR THE PARKING REQUIREMENTS THERE WILL BE A TOTAL OF 84 SPOTS CONSISTING OF 34 RESIDENTS SPOTS 1 PER 3 UNITS. ALONG WITH 50 STAFF SPOTS. OF THESE 84 SPOTS ONLY ONE IS REQUIRED TO BE ADA ACCESSIBLE THIS NUMBER WILL BE MOVED UP TO 5 DUE TO THE NATURE OF THE FACILITY.



## SITE

#### SITE SELECTION

THIS SITE WAS SELECTED FOR SEVERAL REASONS. THE FIRST BEING THAT THE SITE ALLOWS FOR RESIDENTS TO HAVE EASY ACCESS TO THE SURROUNDING NEIGHBORHOOD AND BUSINESS. THE SITE ALSO ALLOWS RESIDENTS EASY ACCESS TO DOWNTOWN GRANDFORKS ALLOWING RESIDENTS TO STILL BE CONNECTED TO THE COMMUNITY.

THE SITE DOES ALSO OFFER SOME CHALLENGES IN THE FORM OF HEAVY TRAFFIC DUE TO THE SURROUNDING BUSINESS AS WELL AS POSSIBLE SAFETY PROBLEMS DUE TO THE BUSY ROADWAY CONNECTED TO THE SITE. AS FOR SOME BENEFITS TO THE SITE ALONG WITH ITS CONNECTIONS THERE IS A LARGE AMOUNT OF AREA FOR OUTDOOR GREENSPACE FOR THE RESIDENTS AS WELL AS PUBLIC AMENITIES NEARBY THAT RESIDENTS WILL BE ABLE TO USE.

OVERALL THE SITE WILL OFFER CHALLENGES AND BENEFITS WILL ALSO ALLOWING THIS PROPOSED STRUCTURE TO BENEFIT FROM AS WELL AS BENEFITS THE COMMUNITY BY DIVERSIFYING THE COMMUNITY AS WELL AS ALLOWING RESIDIENTS TO LIVE CLOSER TO THEIR FAMILIES AND ENJOY A HIGHER STANDARD OF LIVING.

## SITE DETAILS

THE SITE IS 436FT BY 655FT FOR AN AREA OF 285,580FT2

THE SITE HAS SEVERAL TREES TOWARDS THE SOUTHERN END AS WELL AS ONE ENTRANCES ONTO WASHINGTON S

THE SITE IS OVERALL VERY FLAT WITH A SMALL SLOPE TOWARDS THE CENTER.

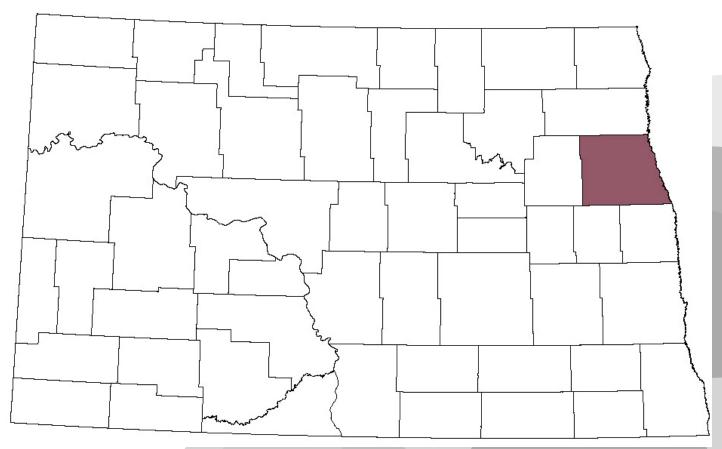


FIG:38 ND COUNTY MAP





FIG:40 LOT MAP



FIG:41 SITE NORTH WEST VIEW



FIG:42 SITE SOUTH WEST VIEW



FIG:43 SITE SOUTH VIEW

## PROJECT EMPHASIS

1. RESIDENTS HEALTH: ONE OF THE MOST IMPORTANT ASPECT OF THE PROJECT THAT WILL BE ADDRESSED IS THAT OF RESIDESNTS HEALTH. THIS PROJECT WILL PROVIDE A HIGH STANDARD OF LIVING FOR ITS RESIDENTS.

2. INTEGRATION OF SUSTAINABLE ELEMENTS: THIS PROJECT WILL INTEGRATE SUSTAINABLE PRACTICES WITHIN IT TO HELP WITH OPERATION COST AS WELL AS QUALITY OF LIFE FOR THE RESIDENTS.

3. CONSIDERATION TO COMMUNITY: THIS PROJECT WILL WORK TO INTEGRATE SEAMLESSLY WITH IN THE COMMUNITY AND HELP PROVIDE FOR THE COMMUNITY IN THE TERMS OF DESIGN AND RESIDENTS.

### GOALS OF THESIS PROJECT

1. SUCCESSFULLY INTEGRATE MY DESIGN IDEAS

FOR THIS GOAL I WISH TO SUCCESSFULLY INTEGRATE MY DESIGN IDEAS TO THAT OF A PROFESSIONAL STANDARDS, SO I MAY BE BETTER PREPARED TO ENTER THE PROFESSION. BY INTEGRATING MY IDEAS TO THIS STANDARED I WILL BE PUSHING MYSELF TO UTILIZE ALL MY ACADEMIC KNOWLEDGE THAT I HAVE GAINED THROUGH THE COURSE OF THE ARCHITECTURE PROGRAM AT NDSU. I WISH TO ACHIEVE THIS STANDARD FOR INTEGRATING MY IDEAS ON A PERSONAL LEVEL DUE TO I FEEL THAT THIS PROJECT SHOULD AND WILL BE THE BEST THAT I HAVE ACTIVE SO FAR.

2. CREATE A WELCOMING AND HEALING SPACE

THIS GOAL WILL ALLOW ME TO UTILIZE THE TEACHINGS OF SEVERAL DIFFERENT CLASSES TO ALLOW ME TO CREATE A FACILITY THAT WILL NOT JUST FUNCTION BUT WILL BE A PLACE THAT WILL HELP PEOPLE RECOVER AS WELL AS BECOME A SECOND HOME FOR THEM. I CREATED THIS GOAL BECAUSE I WANT THIS PROJECT TO ADD TO OUR UNDERSTANDING OF HOW DESIGN CAN HELP IMPROVE PEOPLE'S LIVES AND POSSIBLY BE USED TO HELP OTHER DESIGNERS EITHER IN SCHOOL OR PRACTICING FIND SOLUTIONS TO CREATING A BETTER LONG TERM CARE FACILITY. IN A MORE PERSONAL LEVEL I WANT TO CREATE A PLACE THAT MY OWN GRANDPARENTS WOULD WANT TO LIVE AT.

### GOALS OF THESIS PROJECT

3. EXPAND MY UNDERSTANDING OF HOW DESIGN AFFECTS OUR HEALTH

THIS GOAL IS MORE OF A PERSONAL GOAL BETTERING MY OWN UNDERSTANDING BUT IN A MORE PORFESSIONAL AND ACADEMIC SENSE I WANT THIS PROJECT TO BRING THIS INFORMATION INTO ONE SPOT TO BETTER HELP OUR UNDERSTANDING OF IT. IN A MORE PROFESSIONAL STANCES ACT AS A CASE STUDY ON WHAT WORKS AND WHAT MAY NOT WORK.

4. TO BETTER MY TECHNICAL SKILLS WITHIN THE DESIGN PROCESS

THIS IS ANOTHER MORE PERSONAL GOAL WHERE I WISH TO BETTER MY OWN TECHNICAL SKILLS IN THE DESIGN PROCESS. BUT THIS GOAL WILL ALSO SHOW WHERE THERE MAY NEED TO BE INCREASE FOCUS WITH TEACHING OF FUTURE PROFESSIONALS. AS WELL AS WITHIN A PROFESSIONAL ASPECT THIS GOAL WILL HELP SHOW MYSELF WHICH SKILLS THAT NEED IMPROVEMENT OR MORE FOCUS GIVEN TO THEM.

5. TO CREATE A PROJECT THAT I AM PROUD OF

THIS GOAL IS AS IT STATES. I WISH THIS PROJECT TO BE ONE I WOULD BE PROUD TO SHOW TO OTHERS. SO THAT WHAT I LEARNED WHILE CREATING IT CAN BE SHARED AND POSSIBLY HELP OTHERS.

OVERALL, MY PLAN FOR PROCEEDING WITH RESEARCH OF MY PREMISE WILL BEGIN WITH THE THEORETICAL PREMISE, WHERE I WILL CONDUCT RESEARCH THROUGH THE USES ACADEMIC JOURNALS AND BOOKS CONCERNING DESIGN AND ITS EFFECTS ON PEOPLE AND THEIR OVERALL COGNITIVE FUNCTIONS AND HOW THESE TWO OVERLAPS. | WILL THEN MOVE INTO PROJECT TYPOLOGY FOR MY PREMISE WHICH IS THAT OF A LONG-TERM CARE FACILITY. AS FOR RESEARCH PRACTICES FOR THIS PORTION OF THE PROJECT IS THROUGH THE USE OF CASE STUDIES SUCH AS THE ONES WITHIN THIS PROPOSAL AS WELL AS THE USES OF ACADEMIC AND GOVERNMENTAL SOURCES FOR RESEARCH REGARDING TYPOLOGY. THESE SAME SOURCES MAY BE USED TO ALSO FIND PROGRAMMATIC REQUIREMENTS. AS FOR THE HISTORICAL CONTEXT AND SITE ANALYSIS | WILL BE USING GOVERNMENT SOURCES TO FIND POSSIBLE SITE CHARACTERISTIC AND USES, AS FOR THE HISTORICAL CONTENTS | WILL BE UTILIZING ARCHIVAL INFORMATION AS WELL AS ACADEMIC SOURCES.

### **RESEARCH PROGRAM**

- 1. CONCEPTUAL RESEARCH
- 2. CASE STUDIES
- 3. MAJOR RESEARCH ASPECTS
- 4. **PROGRAM REQUIREMENTS**
- 5. SPACE REQUIREMENTS
- 6. SITE ANALYSIS
- 7. HISTORICAL CONTEXT RESEARCH

### DESIGN METHODOLOGY

- 1. QUANTITATIVE/ QUALITATIVE ANALYSIS
- 2. SINGLE PERSON INTERVIEWS
- 3. ARCHIVAL SEARCH
- 4. STATISTICAL DATA

### DOCUMENTATION OF DESIGN PROCESS

- 1. DOCUMENTATION WILL BE COMPILE THROUGH PHOTOGRAPHS AND TEXT.
- 2. PRESERVATION WILL BE DONE THROUGH NDSU THESIS ARCHIVES
- 3. THE PROJECT WILL ALSO BE MADE AVAILABLE THROUGH NDSU ARCHIVE
- 4. THE PROJECT WILL BE PRESENT USING MODELS, PRESENTATION BOARDS, AS DIGITAL SUBMISSIONS AND WILL BE COMPLETED WITHIN SPRING OF 2021.

### WORK SCHEDULE

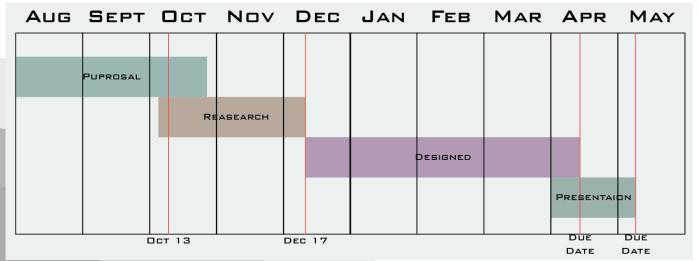


FIG:45

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## THEORETICAL RESEARCH

SO, TO BEGIN GOING OVER MY RESEARCH I WILL JUST REITERATE THE PROBLEM THAT I WISH TO SOLVE, WHICH WAS TO BETTER THE LIVES AND INCREASE PEOPLE'S INDEPENDENCE WHO ARE SUFFERING FROM DEMENTIA OR ALZHEIMER S AND HAVING TO BE CARED FOR.

"IN 2002, THE PREVALENCE OF DEMENTIA AMONG INDIVIDUALS AGED 71 AND OLDER WAS 13.9% AND COMPRISED 3.4MILLION INDIVIDUALS IN THE UNITED STATES" (GESINE MARQUARDT, DR-ING, 2011). THE FOCUSES FOR THIS PROBLEM WAS MOVED TO THOSE LIVING WITHIN LONG TERM CARE FACILITIES. THIS PROBLEM LEAD TO THE THESIS STATEMENT FOR THIS PROJECT WHICH IS, HOW CAN ARCHITECTURE AND DESIGN BE UTILIZED TO ALLOW RESIDENTS TO MAINTAIN INDEPENDENCE AND FREEDOM FOR AS LONG AS POSSIBLE.

THROUGHOUT THIS RESEARCH PAPER A LARGER AMOUNT OF ARTICLES THAT COVER DIFFERENT ASPECTS OF DESIGN THAT CAN BE UNITIZED TO HELP, AND SUPPORT RESIDENTS REMAIN INDEPENDENT HAVE BEEN FOUND. THESE ARTICLES COVER MUCH, FROM LAYOUTS AND USES OF TEXTURE AND PATTERNS, TO MORE FOCUSED ASPECTS SUCH AS SIGNAGE AND ROUTINES THAT CAN BE IMPLANTED. SO, THIS PAPER WILL RUN THROUGH THE FINDINGS OF THESE ARTILCES BY ROUGHLY CATEGORIZING THEM TO THE MAJOR ASPECTS THAT THEY COVER SUCH AS LAYOUT, SENSE OF HOME, AND FINALLY NATURE.

SO, TO BEGIN FOR LAYOUT PORTION OF THIS PAPER IT HAS BEEN SHOWN THAT THERE ARE MANY ASPECTS TO CONSIDER SUCH AS HOW INTERSECTIONS OF HALLWAYS AND PLACEMENT OF DOORS ALONG SUCH HALLWAYS CAN BOTH HELP AND HINDER INDIVIDUALS GREATLY. SUCH HOW REPEATING ELEMENTS ALONG HALLS CAN LEAD TO DISORIENTATION AMONG RESIDENTS WITH DEMENTIA OR ALZHEIMER'S. MANY OTHER ASPECTS WHERE ALSO FOUND THAT WOULD SEEM TO HINDER RESIDENTS WHICH IS SHOWN HERE

"Results showed that residents who had longer routes (as in the communal homes) had more difficulty finding their way around. Also, the number of exit points from a route was correlated with the tendency of residents to get lost. Repetitive elements, such as a large number of doors in a corridor, were confusing as well. Simple decision points and a larger number of zones (places with different functions and meanings), such as were found in the group homes, supported residents'wayfinding abilities" (Gesine Marquardt, DR-ING, 2011). This quote helps show some of the more key aspects and ways that design can effect residents.

OTHER ASPECT THAT HAVE BEEN FOUND RELATING TO LAYOUT AND SPECIAL ORGANIZATION ARE HOW SPACES MUST BE DISTINCTIVE TO ALLOW RESIDENTS TO FIND THEM WHILE ALSO NOT BEING OVERBEARING OR OVERLY CONFUSING IN LAYOUT OR DESIGN. THIS WAS SHOWN IN SEVERAL ARTICLES BY THEM GOING OVER HOW SPACE MUST BECOME AN ANCHOR POINT, AS THIS WILL ALLOW RESIDENTS TO UTILIZE THEM AS WAYPOINTS IN ORDER TO ORIENT THEMSELVES WITHIN A SPACE. SEVERAL ARTICLES ALSO WENT INTO HOW SPACES AND THE OVERALL LAYOUT OF A STRUCTURE SHOULD ALLOW FOR VISUAL SIGHT TO THE SPACE THAT YOU WISH RESIDENTS TO BE ABLE TO UTILIZE OR GO TO. THIS SHOULD CREATE A SMALLER MORE HOME LIKE EXPERIENCES WITH DIRECT VIEWS TO LOCATIONS AND SHORTER ROUTES. "OPEN LAY OUT PLANS ARE ADVISED, WITH THE USE OF STRAIGHT HALLWAYS, LESS FURNITURE AND WITH ATTENTION FOR ENHANCED VISIBILITY OF COMMON ROOMS AND TOILETS" (MARIEKE VAN VRACEM, NELE SPRUYTTE, ANJA DECLERCO, AND CHANTAL VAN AUDENHOVE, 2015). ALONG WITH THESE ARTICLES MANY OTHER ECHOED THE SAME FINDINGS FOR THE USE IN LAYOUTS WHICH ARE DISTINCTIVE SPACES, VISUAL SIGHT TO AREAS WITHIN THE STRUCTURE AND LESS REPETITIVE FEATURES.

A SENSE OF HOME IS ONE OF IF NOT THE MOST IMPORTANT FACTOR IN HELPING RESIDENTS MAINTAIN THEIR INDEPENDENCE AND SENSE OF FREEDOM FOR AS LONG AS POSSIBLE. "A "SENSE OF HOME" IS ASSOCIATED WITH HAVING A PRIVATE ROOM IN A NURSING HOME. A SHARED BEDROOM IS OFTEN UNACCEPTABLE FOR MOST RESIDENTS. THE DESIRE FOR A PRIVATE ROOM MAY HAVE A FOUNDATION IN HAVING OPPORTUNITIES TO BE ON ONE'S OWN, THE WISH FOR PRIVACY, AND HAVING PERSONAL BELONGINGS AROUND ONESELF." (A. EIJKELENBOOM, H. VERBEEK, E. FELIX, J. VAN HOOF, 2017). ALONG WITH PRIVATE SPACE AS IT HAS BEEN SHOWN THAT TO CREATE A SENSE OF HOME, MAJOR OTHER ASPECTS WHERE SIZE OF THE ROOM AS WELL AS THE PLACEMENT OF FURNITURE WITHIN A SPACE.

OTHER MAJOR ASPECTS THAT WHERE FOUND WAS THAT PUBLIC SPACE IS ALSO OF GREAT IMPORTANCE, THOUGHT THESE SPACES SHOULD BE CLOSE TO THE PRIVATE ROOMS BUT STILL SEPARATE ALONG WITH THESE SPACES BEING SMALLER IN SCALE THAN WHAT WOULD BE TRADITIONALLY FOUND WITH LONG TERM CARE FACILITIES. THESE SPACES SHOULD ALSO BE FINISHED WITH MORE RESIDENTIAL FINISHES THOUGH AVOIDING COMPLEX TEXTURES OR PATTERNS AS THIS HAS THE POSSIBILITY TO CAUSE AGITATION AMONG RESIDENTS. "BUILDING MATERIALS WITH DIRECTIONAL TEXTURES (E.G. TEXTURES WITH LINES OF DIFFERENT WIDTHS OR RANGES) RESULTED IN THE DEMENTED ELDERLY CHANGING THEIR VISUAL PERCEPTIONS AND SEEING IMAGES THAT DID NOT EXIST, WHICH BROUGHT AN EXTREME BURDEN FOR CAREGIVERS (HWANG 2011)." (YAO-RONG HWANG, 2014). THE OTHER MAJOR ASPECT FOR CREATING A SENSE OF HOME WAS THROUGH THE CONNECTION TO NATURE, SUCH AS OPERATIONAL WINDOWS, SOCIAL AREAS THAT HAVE VIEWS TO SEE OUT OR POSSIBILITY INTERIOR GARDENS. THOUGH THE FINAL DECISIONS IT IS UP TO THE RESIDENT TO DECIDE IF THEY FEEL AT HOME WITHIN THE FACILITY.

NATURE AND ITS IMPACT ON THE WELLBEING OF RESIDENTS HAS BEEN BROUGHT UP IN ALMOST EVERY ARTICLE THAT HAS BEEN REVIEWED AND READ. CAN BE SEEN IN THIS QUOTE WHICH STATES. "CAREGIVERS REPORTED SEVERAL EXAMPLES OF USING NATURE AND NATURAL MATERIALS TO CREATE A CALM AND PEACEFUL ATMOSPHERE: FLOWERS IN THE LIVING ROOM, A VIEW OR PICTURES OF NATURE, GARDENING, A WALK OUTSIDE. CAREGIVERS STATED THAT THE POSITIVE EFFECTS OF NATURE MIGHT BE ATTRIBUTABLE TO THE MULTIPLE SENSORY STIMULATION IT PROVIDES, SUCH AS THE SMELL, TOUCH OR SIGHT, WHICH SEEMS VERY IMPORTANT TO THE PWD." (MARIEKE VAN VRACEM, NELE SPRUYTE, ANJA DECLERCQ, AND CHANTAL VAN AUDENHOVE, 2015).

NATURAL ELEMENTS HAVE BEEN BROUGHT UP AS ALSO DECREASING AGITATION AMONG RESIDENTS. RESIDENTS ALSO LIKE TO BE OUTSIDE OR HAVE VIEWS TO STAY CONNECTED TO THE NEIGHBORHOOD THIS IS NOT ONLY IMPORTANT TO RESIDENTS BUT ALSO THE FAMILY OF THE RESIDENTS. "USING OUTSIDE SPACES TO FACILITATE ENGAGEMENT WITH THE SENSES AND PARTICIPATION IN MEANINGFUL ACTIVITIES WAS REGARDED AS REMARKABLY IMPORTANT BY FAMILY AND CAREGIVERS. "THIS IS THE NEW GREENHOUSE OF THE NURSING HOME. SHE ALWAYS HAD ONE HERSELF AT HOME, AS WELL AS A VEGETABLE GARDEN. UNTIL A YEAR AGO SHE HAD CHICKENS AS WELL, ABOUT THREE, AND SHE ALWAYS HAD FRESH EGGS. TO HER THIS IS A HOMELIKE THING." [RELATIVE] RESIDENTS MAY EXPRESS A DESIRE TO GO OUTSIDE THE FACILITY MORE OFTEN. HAVING A VIEW IN ITSELF WAS ALSO IMPORTANT TO RESIDENTS. RESIDENTS MAY NOT MAKE A DISTINCTION AMONG THE TYPES OF VIEW FROM THE ROOM, ANY TYPE OF VIEW WAS APPRECIATED, WHETHER IT WAS A PARK, TRAFFIC, A PLAYGROUND WITH CHILDREN, A LIVELY STREET, OR A BUILDING. RESIDENTS MAY VALUE BALCONIES AND THE VIEWS FROM THE ROOM." (A. EIJKELENBOOM, H. VERBEEK, E. FELIX, J. VAN HOOF, 2017). ALONG WITH VIEWS AND OTHER NATURAL ELEMENTS, GARDENS HAVE ALSO BEEN SHOWN TO HELP RESIDENTS AS THEY ACT AS A SOCIAL AREA, OR ANOTHER CONNECTION TO THE NEIGHBORHOOD AS WELL AS A PLACE FOR ACTIVITIES AND HOBBIES. THROUGH CONSIDERATION MUST BE TAKEN INTO EFFECT AS TO NOT CREATE A SPACE THAT IS NOT TO ELABORATE AS WELL AS MANY OF THE SAME STRATEGY'S THAT WHERE UTILIZED WITHIN INTERIOR LAYOUTS SHOULD BE UTILIZED WITHIN EXTERIOR SPACES AS WELL.

ALONG WITH THE QUALITATIVE RESEARCH THAT IS SHOWN ABOVE AND CONTINUED WITHIN THE LITERATURE REVIEWS, WE HAVE ALSO CONDUCTED SEVERAL INTERVIEWS WITH STAFF AND A RESIDENT WHO LIVES WITHIN A MEMORY CARE SECTION OF A LONG-TERM CARE FACILITY. THESE INTERVIEWS WERE EXTREMELY USEFUL, THOUGH DUE TO THE CURRENT PANDEMIC WE WERE UNABLE TO CONDUCT MORE AS WELL AS THE RESIDENT WE WERE ABLE TO INTERVIEW STATED THAT SHE WOULD NOT BE ABLE TO COMMENT OF CERTAIN QUESTION CONCERNING WAYFINDING WITHIN THE FACILITY AS SHE MOVED INTO THE FACILITY AT THE BEGING OF THE OUTBREAK OF THE PANDEMIC AND WAS QUARANTINED WITHIN HER ROOM SENSE THEN. DO TO THIS SEVERAL OF THE INTERVIEW QUESTION COULD NOT BE ASKED. THE INTERVIEWS FOR THE STAFF WHERE UNAFFECTED.

THE INTERVIEW FOR THE RESIDENT FOCUED ON HOW SHE FELT WITHIN HER ROOM AND WHAT PARTS OF THE ROOM'S LAYOUT HELP OR HINDER HER DAILY LIFE. AS WELL AS SEVERAL QUESTION ASKING ABOUT LIGHT, COLOR, TEXTURE, AND SIZE OF THE ROOM AND HOW IT AFFECTS HER DAILY LIFE. WITH FINAL QUESTION ASKING IF THERE WAS ANY PORTION OF THE STRUCTURE THAT SHE REMEMBERED FROM WHEN SHE MOVED IN.

THE RESULTS THAT WERE FOUND FROM THIS INTERVIEW IS THAT FOR THE LAYOUT OF THE ROOM IT DOES NOT HINDER HER WITHIN HER DAILY LIFE. SHE STATED THAT "LIKE MY ROOM VERY WELL, ITS BIG." THIS CORRELATES WITH SEVERAL STUDIES AND OTHER SOURCES THAT CONDUCTED INTERVIEWS WHICH SHOWED THAT SIZE OF ONE'S ROOM WAS A MAJOR POINT FOR RESIDENTS, WHEN ASKED ABOUT THE COLOR AND TEXTURE WITHIN HER ROOM SHE THOUGHT THEY WHERE FINE AND DID NOT ELABORATE ON THEM THOUGH SHE DID GO ON TO TALK ABOUT HOW THE LIGHT WAS GOOD FOR TASKS WITH HER ROOM. LIGHTING HAS ALSO BEEN BROUGHT UP IN SEVERAL STUDIES AND HOW IT SHOULD BE ALTERED TO REACT TO RESIDENTS AGEING EYES WHICH WILL NEED HIGHER LIGHT LEVELS FOR COMPLETING TASKS OR HOBBIES. THE NEXT SEVERAL QUESTIONS ASK INVOLVED HER ABILITY TO FIND HER WAY ABOUT HER ROOM AND THE FACILITY. WHEN ASKED ABOUT HER ABILITY TO MOVE ABOUT THE ROOM. SHE MENTIONED ITS SIZE AND NOT BUMPING INTO THINGS AS WELL AS BEING ABLE TO SEE WHERE SHE NEEDED TO GO. AS FOR MOVING ABOUT THE FACILITY SHE COULD NOT SAY AS SHE HAS BEEN IN QUARANTINE SINCE MOVING TO THE FACILITY. FOLLOWING THESE QUESTIONS WHEN ASKED ABOUT IF SHE REMEMBERED ANY ASPECTS OF THE FACILITY WHEN SHE WAS MOVED IN. SHE STATED THAT SHE COULD NOT REMEMBER ANY OF THE LOWER FLOOR OF THE FACILITY AND LITTLE OF THE FLOOR SHE WAS ON.

THE INTERVIEWS INVOLVING THE STAFF FOCUSED ON WHAT ASPECTS THEY END UP HELPING RESIDENTS THE MOST WITH AND IF THEY HAVE NOTICED CERTAIN ROOMS AND LAYOUTS ALONG WITH LIGHTING OR MATERIALS THAT CAUSE EITHER NEGATIVE OR POSITIVE EFFECTS WITHIN RESIDENTS.

FROM THE INTERVIEWS THE MOST COMMON SPACES THAT RESIDENTS NEEDED HELP FINDING WAS THE BATHROOM ALONG WITH THIS THEY STATED THAT FURNITURE WITHIN SPACES SEEMS TO CAUSE THE MOST ISSUES IF THERE IS NOT ANY EXTRA ROOM TO MANEUVER WITHIN THE SPACE, THIS WAS A COMMON STATEMENT WITHIN OTHER RESEARCH DOCUMENTS THAT WHERE USED WITHIN THIS PROJECT. AS FOR THE FINDINGS CONCERNING MATERIALS AND LIGHTING, ONE OF THE STAFF INTERVIEWED STATED THAT THEY HAVE NOTICED LIGHTING PLAYING AN EFFECT ON RESIDENTS SUCH AS WHEN IT IS OVER CASTED OUT OR IF A SPACE IS DIMMER THAN NORMAL RESIDENTS SEEM TO BE MORE LETHARGIC AND PRONE TO SLEEPING MORE WHILE ON SUNNY DAYS OR IF THERE IS A STANDARD AMOUNT OF LIGHTING RESIDENTS ARE MORE ACTIVE DURING THE DAY. WHEN ASKED IF RESIDENTS SEEM NERVOUS OR AGITATED IN SPACES COMPARED OTHERS, ONE OF THE STAFF MEMBERS STATED THAT THEY NOTICED AN INCREASE OF AGITATION AND NERVOUSNESS WHEN RESIDENTS WENT TO DO SHOPPING OR GO TO A PLACES THAT THEY NORMALLY DO NOT GO TO OR SPEND MUCH TIME IN. THIS WOULD INFER THAT A SINCE OF NORMALCY AND HOME WOULD BE KEY TO PREVENTING THESE FEELINGS WITHIN RESIDENTS AND TO PROVIDE A BETTER STANDARD OF LIVING OR CARE.

THESE INTERVIEWS PROVIDE MUCH INSIGHT INTO HOW RESIDENTS AND STAFF FUNCTION AND WHAT CHALLENGES AND POSITIVE ASPECTS THAT DESIGN HAS WITH THEM. THESE INTERVIEWS ALSO HELP BRING INTO FOCUS SEVERAL CHALLENGES AND KEY AREAS SUCH AS LIGHTING AND SIZING OF SPACES THAT NEEDED TO BE CAREFULLY ADDRESSED WITHIN A DESIGN TO BRING FORWARD THEIR POSITIVE ASPECTS TO PROVIDE RESIDENTS WITH A SENSE OF FREEDOM.

#### INTRODUCTION

THROUGH THIS LITERATURE REVIEW WILL BE GOING OVER FOUR SEPARATE ARTICLES THAT PERTAIN TO HOW ARCHITECTURE CAN AFFECT PEOPLE IN LONG-TERM CARE FACILITIES SUCH AS HOW NURSING HOMES AND OTHER LONG-TERM CARE FACILITIES CAN CREATE A SENSE OF FREEDOM FOR RESIDENTS THROUGH THE USES OF ARCHITECTURE AND OTHER DESIGN ASPECTS. IN THIS REVIEW IT WILL DISCUSS AND ANALYZE SEVERAL ASPECTS OF THESE ARTICLES AND ADD WHAT MAY INFLUENCES MY PROJECT AS WELL AS MY THOUGHTS ON THESE ARTICLES.

#### LITERATURE REVIEW 1

ARTICLE:

HOW ARCHITECTURAL DESIGN AFFORDS EXPERIENCES OF FREEDOM IN RESIDENTIAL CARE FOR OLDER PEOPLE

AUTHOR:

IRIS VAN STEENWINKELA, BERNADETTE DIERCKX DE CASTERLÉB, ANN Heylighena

#### INTRODUCTION

THROUGH THIS REVIEW WE WILL BE GOING OVER THE DIFFERENT ASPECTS OF THE ARTICLE "HOW ARCHITECTURAL DESIGN AFFORDS EXPERIENCES OF FREEDOM IN RESIDENTIAL CARE FOR OLDER PEOPLE" WHICH IS A STUDY DONE BY IRIS VAN STEENWINKELA, BERNADETTE DIERCLX DE CASTERLÉB, AND ANN HEYLIGHENA. THE STUDY WHICH TOKE PLACES AT A LONG-TERM CARE FACILITY CALLED HEATHER HOUSE WHICH SPECIALIZES IN CARE OF PEOPLE SUFFERING FROM PHYSICAL IMPAIRMENTS, PSYCHOSOCIAL PROBLEMS, DEMENTIA, AND PSYCHIATRIC PROBLEMS WHICH ARE CAUSED BY OLD AGE. THE ARTICLE ITSELF WAS FINANCED BY RESEARCH FUND KU LEUVEN AS WELL AS THE FIRM THAT DESIGNED HEATHER HOUSE WHICH WENT UNNAMED. AS FOR THE MAJOR ASPECTS THAT WILL BE DISCUSSING AND ANALYZED, ARE HOW DESIGN ASPECTS OF THE FACILITY SUCH AS FLOOR PLANS ARE SHOWN AND DISCUSSED WITHIN THE POROJECT TO BE AFFECTING THE RESIDENTS WITHIN THE FACILITY.

AFTER ANALYZING THIS PORTION OF THE ARTICLE, I WILL ALSO GIVE MY OPINION ON THE SUBJECT MATTER DISCUSSED AND HOW I CAME TO SUCH A CONCLUSION. THE NEXT MAJOR ASPECT THAT WE WILL GO OVER WITHIN THIS ARTICLE WILL BE HOW CREATING SMALLER GROUPINGS OF RESIDENTS CAN AFFECT OVERALL CARE AND SENSE OF FREEDOM WITHIN THE RESIDENTS. FINALLY, WE WILL BE LOOKING AT AND DISCUSSING AS WELL AS ANALYZING HOW SOCIAL INTERACTIONS THAT DESIGN AND ARCHITECTURE CAN CREATE BOTH THROUGH THE USES OF LANDSCAPE TO CONNECT RESIDENTS TO NATURE AS WELL AS HOW DESIGN CAN BRING PEOPLE TOGETHER TO INTERACT OR SPERATE THEM INTO MORE PRIVATE AREAS OR SPACE. AT THE END OF THIS LITERATURE REVIEW WE WILL GO OVER ALL ASPECTS OF THIS ARTICLE AS A HOLE AND FORMULATE MY OVERALL THOUGHTS ON THIS ARTICLE ALONG WITH WHAT ASPECTS OF THIS ARTICLE I AGREED WITH WHICH PORTIONS I DID NOT AGREE WITH.

**DISCUSSION / ANALYZATION:** 

SO, TO BEGIN WE WILL QUICKLY GO OVER SEVERAL DIFFERENT ASPECTS OF WHAT THIS ARTICLE HAD TO STATE ABOUT HOW ARCHITECTURAL DESIGN SUCH AS FLOOR PLANS AND OTHER ASPECTS OF LAYOUTS AND DESIGN SUCH AS OPENING PLACEMENTS ALONG WITH ROOM SIZES CAN INFLUENCE RESIDENTS AND THEIR ABILITY TO WAYFIND AS WELL AS THEIR FEELINGS OF FREEDOM AND ACCESSIBILITY IN A LONG-TERM CARE FACILITY SUCH AS HEATHER HOUSE.

THE ARTICLE STARTS OUT BY GOING OVER THE OVERALL DESIGN AND LAYOUT OF THE STRUCTURE. IT GOES ON TO STATE THAT HEATHER HOUSES IS DIVIDED UP TO SEVERAL DIFFERENT RESIDENCY'S FACILITY. HOUSING 16 PEOPLE WITHIN EACH ONE, WITH INDIVIDUAL ROOMS AND RESTROOMS. THE FACILITY IS DESIGNED TO ALLOW EASY ACCESS TO NATURE AND TO ALLOW LARGE AMOUNT OF NATURAL LIGHT WITHIN THE FACILITY. ALONG WITH THE EXTERIOR BEING MORE RESIDENTIAL IN NATURE. AS FOR THE LAYOUT ITSELF THE ARTICLE STATES.

"EACH DWELLING UNIT CONSISTS OF WELL-LIT DWELLING PLACES COMPACTLY CLUSTERED AROUND A PATIO IN AN OPEN PLAN (I.E., A CONTINUOUS SPACE WITHOUT DOORS) (FIG. 1B, C). TWO ADJOINING PRIVATE ROOMS - DESIGNED TO BE LITTLE HOUSES IN THEMSELVES, WITH AN ENTRANCE, SITTING CORNER, BEDROOM AND BATHROOM (FIG. 1D) -GIVE WAY TO AN ENTRANCE, LIVING ROOM, HOBBY ROOM, OR KITCHEN-DINING AREA. THESE COMMON ROOMS ARE SCALED TO ACCOMMODATE EIGHT RESIDENTS, EACH WITH A STROLLER AND WHEELCHAIR. FOUR OF THESE DWELLING UNITS ARE GROUPED IN TWO BUILDING BLOCKS OF TWO FLOORS HIGH, CONNECTED WITH A BRIDGE ON THE FIRST FLOOR, THEIR FRONT DOORS FACE EACH OTHER, THE BASEMENT CONTAINS A BATHROOM FOR RESIDENTS, AND STAFF'S UTILITY AND STORAGE ROOMS, A GARDEN PATH CONNECTS THE GARDEN GATES, (FRONT) DOORS AND TERRACES (FIG. 1e). TO INTEGRATE HEATHER HOUSE IN THE RESIDENTIAL AREA, THE BUILDING STANDS ALONG THE STREET (RATHER THAN DRAWING BACK FROM IT), AND ITS FAÇADE IS ARTICULATED INTO SMALLER PARTS WITH PITCHED ROOFS, AND VARYING WINDOWS (FIG. 1A), LIKE THE NEIGHBORING HOUSES. ADDITIONALLY, THE SITE AND BUILDING INCLUDE RESIDENTIAL ELEMENTS LIKE AN HEDGE, GARDEN PATH, GARDEN GATE, AND FRONT DOOR WITH A LAMP." (STEENWINKELA, CASTERLÉB, HEYLIGHENA. 2017. PG. 2)

As FOR THIS QUOTE STATED ABOVE, THIS FORMAT FOR LONG-TERM CARE FACILITY SEEMS TO BE INCREASING IN POPULARITY AND USES FROM WHAT WE HAVE GATHERED THROUGH OUR RESEARCH. AS SEVERAL OF THE CASE STUDIES THAT WE HAVE LOOKED OVER AND COMPLETED HAVE SHOWED USING DIFFERENT ASPECTS OF THIS TYPE OF LAYOUT AND DESIGN PROGRAMMING FOR THERE OWN RESIDENTS AND FACILITIES WHILE TWEAKING IT TO THEIR OWN NEEDS AND CONSTRAINTS OF THERE STRUCTURE OR SITE, THE RESEARCH DOCUMENT ALSO WENT ON TO INTERVIEW SEVERAL RESIDENTS ABOUT THERE EXPERIENCES WITHIN THESE SMALLER HOUSING SYSTEMS FOR LONG-TERM CARE FACILITIES AND FROM WHAT WAS GATHERED IN THIS ARTICLE IT SEEMS THAT THE OVERALL LAYOUT SUCH AS THIS WAS AFFECTING MANY RESIDENTS IN A POSITIVE MANNER ESPECIALLY WHEN THE INTERVIEWS ASK ABOUT HOW THEY FELT ABOUT THEIR FEELINGS TOWARDS THE AMOUNT OF FREEDOM THEY HAVE WITHIN THE FACILITY. THIS IS BEST SHOWN IN THESE TWO CONVERSATIONS THAT AN INTERVIEWER HAD WITH A DIFFERENT RESIDENT AND CAREGIVER WORKING IN THE FACILITY.

THE SPACES HERE: PHENOMENAL! [LAUGHING] YOU CAN TAKE TURNS VERY EASILY ALSO FOR PEOPLE IN WHEELCHAIRS WIDE ENOUGH YOU DON'T EASILY BUMP INTO SOMETHING [...] YES, MUCH MORE SPACE, REALLY (STEENWINKELA, CASTERLÉB, HEYLIGHENA. 2017. PG. 5).

THIS WAS THE RESPONSES OF A CAREGIVER WORKING IN HEATHER HOUSE. ANOTHER CONVERSATION BETWEEN AN INTERVIEWER AND RESIDENTS ALSO SHOWS HOW THIS STYLE OF LAYOUT SEEMS TO BE AFFECTING RESIDENTS IN A POSITIVE MANNER.

[IN THE FORMER FACILITY] I COULDN'T GO OUTSIDE
[I COULD] ONLY WALK THROUGH THAT LONG CORRIDOR
AND WHEN THEY ASKED ME TO MOVE TO THIS PLACE
I SAID: "YES, BUT I WANT A ROOM DOWNSTAIRS
NOT UPSTAIRS ANYMORE"
YES, BECAUSE THE ELEVATOR WAS ALWAYS BROKEN
AND THEN THEY SAID: "YES, YOU CAN HAVE A ROOM DOWNSTAIRS"
I SAID: "THAN WE CAN GO TOMORROW!" [LAUGHING] (STEENWINKE
LA, CASTERLÉB, HEYLIGHENA. 2017. PG. 5).

THIS CONVERSATION WAS FOLLOWED BY THE ARTICLE GOING OVER HOW THE LAYOUT OF THE FACILITY ALLOW RESIDENTS MORE FREEDOM TO GO ABOUT THEIR LIVES WITH MORE FREEDOM WHILE STILL BEING ABLE TO NAVIGATE THE FACILITY. ALLOWING INDIVIDUALS TO EXPERIENCE NATURE GO FOR STROLLS OR VISIT FRIENDS WITHIN THE FACILITY. DOCUMENT WENT ON TO STATE THAT FREEDOM VARIED BETWEEN RESIDENTS MAINLY DUE TO PERSONALITY. IN THE FORM THAT RESIDENTS WITH PHYSICAL DISABILITIES SUCH AS POOR EYESIGHT STATED THAT THEY WISHED THEY WOULD BE ABLE TO EXPERIENCES AND LEAVE THE FACILITY WITHOUT BEING ESCORTED, AS WELL AS THERE SEEMED THAT THERE WAS SOME FRICTION BETWEEN RESIDENTS WITH MORE SEVER DEMENTIA AND RESIDENT WITH NO DEMENTIA OR TO A LOWER DEGREE WITH THE RESIDENTS WITH OUT DEMENTIA OR OTHER SEVER COGNITIVE DISORDERS FOUND IT HARDER MAKE SOCIAL CONNECTIONS AND TO CREATE A MORE HOME LIKE EXPERIENCES.

**MY THOUGHTS:** 

OVERALL, I FEEL THAT THE DESIGN AND LAYOUT FOR HEATHER HOUSE IS WORTHWHILE, I SAY THIS BECAUSE IT ADDRESSES MANY PROBLEMS THAT ARE FOUND IN OTHER LONG-TERM CARE FACILITY ESPECIALLY THE OLDER FACILITIES THAT OPERATE AND ARE DESIGNED MORE LIKE HOSPITALS THAN HOMES FOR THERE RESIDENTS. HEATHER HOUSES SEEMS TO ALLOW RESIDENTS MORE FREEDOM BY ALLOWING THEM TO BE MORE CONNECTED TO THE OUTDOORS IN THE FORMS OF GARDENS AROUND THE FACILITY AS WELL AS INTERIOR COURTYARD PATIOS. THE STRUCTURES ALSO SEEM TO LEND ITSELF TO ALLOWING RESIDENTS TO EASILY FIND THEIR WAY THROUGH OUT IT, DUE TO EACH UNIT ONLY HAVING 16 SPERATE ROOMS THAT RESIDENTS CAN CUSTOMIZES AS WELL AS HAVING A MORE OPEN FLOOR PLAN ALLOWING RESIDENTS TO SEE WHERE THEY NEED TO GO AND HOW TO GET THERE, WHICH I BELIEVE WILL HELP RESIDENTS WITH DIMINISHED COGNITIVE ABILITIES TO FIND THERE WAY EASIER. DO TO HAVING TO FORM A SIMPLER MENTAL PATH OR MAP OF THE AREA ALONG WITH THE FACILITY ALLOWING MORE DISTINCTIVE AREAS WITHIN EACH HOME TO ACT AS LANDMARKS FOR THE RESIDENTS.

THOUGH THE FACILITY SEEMS TO HAVE SOME PROBLEMS IN ITS LAYOUT IF IT WAS TO BE USED WITHIN A CLIMATE THAT NORTH DAKOTA HAS. I SAY THIS BECAUSE THE INTERNAL COURT YARDS MAY BECOME BLOCKED DURING WINTER NEGATING THERE USE TO RESIDENTS AS WELL AS THE CONNECTION OF THESE HOMES TO EACH OTHER AS WELL AS THE MAIN FACILITY WILL MOST LIKELY WILL HAVE TO BE ENCLOSED DO TO THE WEATHER. BUT OVERALL, I BELIEVE THAT THE LAYOUT AND DESIGN OF HEATHER HOUSE PROVIDES MORE FREEDOM TO RESIDENTS THEN STANDARD LAYOUTS THAT OTHER LONG-TERM CARE FACILITIES TEND TO TAKE.

#### **DISCUSSION / ANALYZATION:**

THE NEXT PORTION OF THE ARTICLE WHICH WAS DISCUSSING HOW SMALLER SCALE FACILITY OR HOUSING OF RESIDENTS AFFECT THERE OVER ALL SENSE OF FREEDOM. WE WILL BE GOING OVER THIS DO TO HOW HEATHER HOUSE UTILIZES SPERATE HOUSING AREAS FOR THERE RESIDENTS THAT ARE 2 STORIES IN SIZE AND HOUSE 16 RESIDENTS EACH WITH THERE OWN KITCHEN AND SOCIAL AREAS WITHIN EACH HOUSE. WHICH CREATES A SMALLER MORE PERSONAL SIZE FOR A LONG-TERM CARE FACILITY COMPERED TO OTHERS.

THIS PORTION OF THE ARTICLE WENT ABOUT GOING OVER AND INTERVIEWING CAREGIVERS AND RESIDENTS ON THEIR THOUGHTS AND FEELINGS ABOUT THE LIVING CONDITIONS AND MAINLY THE SOCIAL ASPECTS OF THE SMALLER GROUP LIVING CONDITIONS COMPARED TO OTHER FACILITIES. THE ARTICLE WENT ON TO STATE THAT MANY RESIDENTS FELT THAT THEY HAD MORE SPACES WHICH WAS COMMENTED ON IN THE ARTICLE AS DURING DINNER OR OTHER MEALTIMES THAT RESIDENTS DID NOT SIT AS CLOSE TOGETHER THAN THEY DID IN OTHER FACILITIES. IT ALSO WENT OWN TO STATE THAT WITHIN THE FACILITY RESIDENTS SEEM TO BE ABLE TO SOCIALIZE AND FORM MORE SOCIAL CONNECTIONS THEN THAT OF OTHER FACILITIES AS THEY STATED THAT THERE SEEMED TO BE MORE RESIDENTS GETTING TOGETHER FOR COFFEE OR SOCIALIZING OR GOING FOR STROLLS DUTSIDE. WHILE ALSO RESIDENTS SEEMED TO HAVE MORE FREEDOM OVER SOCIALIZING OR NOT AS THEY WHERE ABLE TO GO TO THEIR PRIVATE ROOMS OR BE ABLE TO SIT FARTHER OR IN A MORE PRIVATE SECTION OF THE SITTING AREAS IF THEY DID NOT WANT TO SOCIALIZE WITH ANYONE AT THAT TIME. THIS CAN BEST BE SOWN THROUGH A CONVERSATION BETWEEN AN INTERVIEWER AND CAREGIVER.

IF THEY WANT TO STAY IN THEIR ROOM THEY STAY IN THEIR ROOM IN A REGULAR NURSING HOME IT'S LIKE: "AT EIGHT O'CLOCK IT'S BREAKFAST, EVERYONE HAS TO COME SITTING AT THE TABLE" HERE, IF SOMEONE SAYS: "I WANT TO STAY IN BED LONGER" THAT'S ALLOWED AND BECAUSE THIS IS SMALL-SCALE, YOU CAN ACTUALLY INTRO DUCE THAT (STEENWINKELA, CASTERLÉB, HEYLIGHENA. 2017. PG. 6-7).

THIS QUOTE ALSO SHOWS HOW ARCHITECTURE PLAYS INTO THIS THROUGH THE USES OF SMALLER SCALE FACILITIES AND HOUSING SUCH AS THIS YOU CAN CREATE MORE OPPORTUNITIES TO GIVE RESIDENTS MORE FREEDOM TO GO ABOUT THERE DAY HOW THEY WISH. THE ARTICLE ALSO ADDED TO THIS IN THE FORM OF THAT NOT ONLY SMALLER SCALE FACILITIES OR HOUSING IS NEEDED BUT IT MUST BE COMBINED WITH LARGER SPACES SO THAT THE FACILITY OR HOUSING STRUCTURE IS SMALLER BUT THE SPACES WITHIN ARE LARGER THAN AVERAGE. WHICH GIVES THE RESIDENTS MORE FREEDOM OF MOVEMENT WITHOUT BUMPING INTO THINGS WHILE ALSO GIVING A MORE HOME LIKE FEELING TO THE RESIDENTS. IT ALSO GOES ON TO STATE THAT THE SMALLER SCALE OF EACH HOUSING FACILITY ALLOWED FOR RESIDENTS TO HAVE EASIER ACCESS TO NATURE AND TO BE ABLE TO NAVIGATE THE FACILITY EASIER AND IN A MORE NATURAL WAY AS WELL AS ALLOWED FOR CAREGIVERS TO HAVE A MORE PERSONAL RELATIONSHIP WITH THE RESIDENCES DO TO THE MORE OPEN FLOOR PLAN, LOWER NUMBER OF RESIDENTS IN EACH DWELLING ALONG WITH HAVING THE NURSING STATION INTEGRATED MORE INTO THE LIVING AREAS INSTEAD OF OFF BY ITSELF. ALONG WITH THIS THE DOCUMENT ALSO STATED THAT MANY CAREGIVERS AND RESIDENTS THOUGHT THAT THE SEVERAL LIVING AND SOCIAL AREAS CONTRIBUTED TO A MORE HOME LIKE ENVIRONMENT BECAUSE IT ALLOWED THEM TO HAVE MORE PERSONAL INTERACTIONS AND MOVE ABOUT INSTEAD OF ALL ACTIVITIES HAPPENING IN ONE CENTRAL AREA.

**MY THOUGHTS:** 

THIS PORTION OF THE ARTICLE I FOUND EQUALLY INTERESTING AS THE FIRST PORTION AS IT WENT OVER ANOTHER TREND THAT I HAVE SEEN COMING UP IN SEVERAL OF MY CASE STUDIES BOTH SHOWN ABOVE AND OTHERS THAT I HAVE DONE, AND THIS IS THAT LONG-TERM CARE FACILITIES SUCH AS THESE SEEM TO BE MOVING TO SMALLER GROUPINGS OF RESIDENTS WHILE ALSO PROVIDING MORE SOCIAL AREAS THAT ARE SMALLER IN SIZE. AS FOR MY OVERALL THOUGHTS ON THIS SECTION I DO AGREE WITH WHAT HEATHER HOUSE DID WITH ITS LAYOUT AND DESIGN. I FEEL THAT THE SMALLER SIZE AND MORE OPEN LAYOUT SEEMS TO HELP RESIDENTS FIND THEIR LOCATION AND WHERE THEY NEED TO BE WHILE ALSO LIMITING UNNECESSARY OPTIONS THAT MAY CONFUSE RESIDENTS. ALSO FEEL THAT THE MORE SOCIAL AREAS WITH A SMALLER SIZE THAN NORMAL MAY ALSO HELP WITH THE FEELING OF HOME FOR RESIDENT THOUGH I DO WISH TO INTERVIEW LOCAL RESENTS OF A LONG-TERM CARE FACILITY TO CONFIRM IF THAT IS TRUE WITHIN NORTH DAKOTA AS WELL. ALSO AGREE WITH THE PLACEMENT OF THE NURSE STATION INTEGRATED WITHIN THE LIVING AREA INSTEAD OF TUCKED AWAY SOMEWHERE AS I FEEL THAT THIS WILL ALLOW NURSES TO BETTER CARE FOR THE RESIDENTS BOTH PHYSICALLY WHILE ALSO BEING ABLE TO FORM BETTER CONNECTIONS WITH THE RESIDENTS.

THE ONE ASPECT FROM THIS SECTION OF THE ARTICLE I DID NOT AGREE WITH WAS HOW THE DWELLING UNITS ARE TWO STORIES IN SIZE. I FEEL THAT KEEPING RESIDENTS' ROOMS AND SOCIAL AREAS ALONG WITH DINING AREAS ON THE GROUND FLOOR WOULD BE A BETTER SOLUTION ESPECIALLY FOR THOSE WITH LATER STAGES OF ALZHEIMER'S OR DEMENTIA. I SAY THIS BECAUSE I FEEL THAT THIS WILL MAKE IT EASIER FOR SAID RESIDENTS TO ACCESS AREAS WITHOUT THE NEED TO NAVIGATE STAIR WHICH THEY MAY NEED ASSISTANCE IN DOING SO OR ELEVATORS WHICH MAY CAUSE ISSUES FOR RESIDENTS NOT BEING ABLE TO LOCATE THE ELEVATOR OR FORGETTING HOW TO OPERATE THE ELEVATOR. SO, I FEEL THAT HAVING THE DWELLINGS BEING ONE STORY IN SIZE WOULD HELP NEGATE THESE ISSUES FOR SOME RESIDENTS. BUT OVERALL, I DO AGREE WITH MOST OF THIS SECTION CONCERNING THE SMALLER SCALE APPROACH TO LONG-TERM CARE FACILITIES.

**DISCUSSION / ANALYZATION:** 

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THROUGH OUT THIS ARTICLE THERE SEEM TO BE A COMMON ASPECT THAT YOU COULD CONNECT THROUGHOUT IT WHICH IS THAT ARCHITECTURE AND OTHER DESIGN ASPECTS WHERE FORMING SPACES WHERE SOCIAL CONNECTIONS AND INTERACTIONS COULD TAKE PLACES BOTH BETWEEN RESIDENTS AS WELL AS BETWEEN RESIDENCY AND NATURE. THIS CAN BE SHOWN IN SEVERAL COMMENTS MADE BY RESIDENTS SUCH AS THIS ONE WHERE A RESIDENT IS COMPARING HEATHER HOUSES TO A PREVIOUS LONG-TERM CARE FACILITY THEY STAYED AT WHERE THEY WHERE LOCATED ON AN UPPER FLOOR.

BECAUSE [IN THE OTHER FACILITY] YOU COULDN'T SEE ANYTHING FROM THE FOURTH FLOOR WHEN WE STAYED UP THERE, WE DIDN'T SEE ANYTHING, YOU KNOW IN YOUR ROOM YOU WERE REALLY SHUT IN AND HERE YOU'RE MORE FREE (STEENWINKELA, CASTERLÉB, HEY LIGHENA, 2017, PG, 7).

THIS QUOTE AS WELL AS THE ONE PREVIOUSLY FROM THE RESIDENT COMMENTING ON HOW AT ANOTHER LONG-TERM CARE FACILITY THEY WERE UNABLE TO GO OUTSIDE SHOW HOW ARCHITECTURE CAN CHANGE PERSPECTIVE ON FREEDOM AND PROVIDE CONNECTION JUST THROUGH THE USES OF ADDING MORE WINDOWS TO SEE OUT OF OR LIMITING THE HEIGHT OF A FACILITY AS WELL AS PROVIDING MORE ACCESS TO NATURE THROUGH THE USES OF PATIOS OR EXTERIOR WALKING PATHS THROUGH OUT OR SURROUNDING THE FACILITY. BUT ARCHITECTURE AND DESIGN ELEMENTS CAN ALSO CREATE SOCIAL INTERACTION SUCH AS ALLOWING RESIDENTS TO CONGREGATE IN DIFFERENT AREAS TO SOCIALIZE IN SMALLER GROUPS WHILE ALSO ALLOWING RESIDENTS TO BE ABLE TO AVOID CONFLICT WITH EACH OTHER THROUGH ALLOWING RESIDENTS TO HAVE MORE PERSONAL SPACE OR AS THE QUOTE SHOWS BELLOW TO REMOVE THEMSELFS FROM A SITUATION.

LESS CONFLICTS

BECAUSE YOU CAN AVOID EACH OTHER, SO TO SAY OR WHEN THERE'S SOMETHING WRONG, THEY CAN GO TO THEIR ROOM

[...]

JUST MORE PEACEFUL [THAN IN A "NURSING HOME"] (STEENWINKE LA, CASTERLÉB, HEYLIGHENA. 2017. PG. 7).

OVERALL, HEATHERS HOUSE SHOWS HOW ARCHITECTURE CAN BE UTILIZED TO FURTHER CONNECTIONS BETWEEN RESIDENTS AS WELL AS NATURE THROUGH SIMPLE, SLIGHT TWEAKS TO THE OVERALL DESIGN AS WELL AS PROPER LAYOUTS.

**MY THOUGHTS:** 

ALL THOUGH THIS SECTION OF THE ARTICLE WAS NOT COVERED THAT MUCH THROUGHOUT IT, I FEEL THAT IT IS ONE OF IF NOT THE MOST IMPORTANT PART OF THE DOCUMENT AS IT REINFORCES MUCH OF WHAT WE ARE TAUGHT AND SHOWN THROUGHOUT OUR SCHOOLING AND PROFESSIONAL LIVES. SO, I AGREE GREATLY THAT THE CORE ASPECTS OF A SOLD LAYOUT AND ABILITY TO PROVIDE ACCESS TO BOTH PUBLIC AND MORE PRIVATE SOCIAL AREAS ALONG WITH NATURAL AREAS IS WHAT WILL LEAD TO THE FEELING OF FREEDOM AS WELL AS HOME TO RESIDENTS OF A LONG-TERM CARE FACILITY.

CONCLUSION:

OVERALL, THIS DOCUMENT PROVED EXTREMELY HELPFUL AS IT SHOWED WHAT IDEAS AND CONCEPTS HAVE BEEN TRIED BY OTHER PROFESSIONALS ALREADY AND TO WHAT SUCCESS. AS WELL AS THIS ARTICLE ALLOWED USE TO SEE MANY OF THE SAME IDEAS THAT ARE CONSIDERED FOR OUR OWN PROJECT, IN ACTION AS WELL AS HOW RESIDENTS MAY RESPOND TO THESE IDEAS AND CONCEPTS. THE OTHER MAJOR ASPECT OF THIS DOCUMENT, THAT HELPED US GREATLY WAS IT SHOWED HOW IMPORTANT CERTAIN ASPECTS TO RESIDENTS' FEELINGS OF FREEDOM AND HOME COMPARED TO OTHERS SUCH AS HOW BEING ABLE TO SEE OR GO OUTSIDE WHEN ONE PLEASES WITH OUT ASSISTANCE OR BEING ABLE TO NOT INTERACT WITH ANYONE AND HAVING A MORE SECLUDED AREA OR A PRIVATE ROOM FOR ONE'S SELF TO DO AS THEY PLEASE WITH. SO, TO WRAP THIS REVIEW UP EVEN THOUGH THERE ARE ASPECTS OF HEATHER HOUSE DESIGN THAT WE DO NOT AGREE WITH. ITS OVERALL DESIGN AND FUNCTIONALITY PROVIDED US WITH A GREAT DETAIL OF UNDERSTANDING TO USE WHEN WE PROCEED WITH OUR OWN DESIGN FOR A LONG-TERM CARE FACILITY.

#### LITERATURE REVIEW 2

ARTICLE:

WAYFINDING FOR PEOPLE WITH DEMENTIA: A REVIEW OF THE ROLE OF ARCHITECTURAL DESIGN

AUTHOR:

GESINE MARQUARDT, DR-ING

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#### INTRODUCTION:

THIS RESEARCH DOCUMENT GOES INTO DETAIL ON WAYFINDING AND HOW DEMENTIA AFFECTS WAYFINDING WITHIN INDIVIDUALS WITH DEMENTIA OR ALZHEIMER'S ALONG WITH HOW ARCHITECTURE CAN AFFECT RESIDENTS TO PROVIDE A HIGHER QUALITY OF LIFE AS WELL AS ALLOWING RESIDENT TO MAINTAIN THEIR FREEDOM FOR AS LONG AS POSSIBLE. SO WITHIN THESE LITERATURE REVIEW OF "WAYFINDING FOR PEOPLE WITH DEMENTIA: A REVIEW OF THE ROLE OF ARCHITECTURAL DESIGN" WE WILL BE ANALYZING AND DISCUSSING THE MAJOR TOPIC OF THE ARTICLE WHICH IS HOW ARCHITECTURE CAN AFFECT RESIDENTS ABILITY TO FIND THERE WAY THROUGHOUT A FACILITY OR ORIENTATE THEMSELVES WITHIN THERE SURROUNDING ALONG WITH WHICH OPTIONS THE ARTICLE STATES AS POSSIBLE SOLUTIONS TO HELP RESIDENTS MAINTAIN THERE FREEDOM AND ABILITY TO FIND THERE WAY THROUGHOUT THE FACILITY THROUGH THE USE OF ARCHITECTURE, AFTER THIS WE WILL PROVIDE OUR OWN THOUGHTS ON WHAT THE ARTICLE STATED AND WHAT WE AGREE WITH OR WHAT WE DO NOT AGREE WITH ALONG WITH WHY WE CAME TO THIS CONCLUSION. FINALLY, WE WILL PROVIDE AN OVERALL CONCLUSION OF OUR FINAL THOUGHTS AND DIFFERENT ASPECTS OF THE ARTICLE THAT INFLUENCED OUR OVERALL THOUGHT PROCESS ON OUR OWN PROJECT FOR A LONG-TERM CARE FACILITY.

**DISCUSSION / ANALYZATION:** 

SO, TO BEGIN THE ARTICLE STATES ON HOW ARCHITECTURE CAN AFFECT RESIDENT'S ABILITY TO FIND ONE'S WAY THROUGH OUT A FACILITY AS WELL AS TO ORIENTATE ONESELF. THROUGH OUT THE ARTICLE IT STATES THAT ARCHITECTURE AND OTHER DESIGN CONSIDERATIONS CAN PROVIDE SUPPORT AND ALLOW RESIDENTS TO MAINTAIN THERE INDEPENDENCE FOR AS LONG AS POSSIBLE WHILE ALSO HELPING CONTROL THE OTHER SYMPTOMS OF DEMENTIA OR ALZHEIMER'S SUCH AS AGGRESSION, AGITATION, AS WELL AS TEMPORAL DISORIENTATION WHICH CAN ALL BE DIMINISHED THROUGH THE USES OF ARCHITECTURE AS WELL AS ENVIRONMENTAL QUES IN THE FORM OF OVERALL LAYOUT OF A SPACE OR OTHER DESIGN ASPECTS SUCH AS LIGHTING OR FURNITURE WITHIN A SPACE. THIS CAN BE SEEN IN THIS QUOTE FROM THE ARTICLE.

ENVIRONMENTAL INTERVENTIONS THAT PROMOTE WAYFINDING CAN BE IMPLEMENTED ON TWO LEVELS: THE DESIGN OF THE FLOOR PLAN TYPOLOGY AND ENVIRONMENTAL CUES, WHICH COMPRISE SIGNAGE, FURNISHINGS, LIGHTING, COLORS, ETC. EVEN COMMON MATERIALS THAT CAN BE MANIPULATED OR USED, SUCH AS GROCERIES, WATER, AND MATERIALS FOR HANDICRAFTS, CAN SUPPORT RESIDENTS' ORIENTATION (GESINE MARQUARDT, DR-ING, 2011, PG. 5)

THIS QUOTE SHOWS HOW A VARIETY OF ASPECTS NO MATTER HOW SMALL CAN AFFECT SOMEONE'S ABILITY TO FIND THERE WAY THROUGHOUT A FACILITY OR WHAT QUES MAY CAUSES THEM TO BE ABLE TO ORIENTATE ONESELF WITHIN THEIR SURROUNDINGS. THE ARTICLE THOUGH STATES THAT THE MAJOR CONTRIBUTOR FOR RESIDENTS BEING ABLE TO NAVIGATE ONE'S SURROUNDINGS OR BEING ABLE TO ORIENTATE ONESELF IS THROUGH THE OVERALL LAYOUT OF THE FACILITY OR STRUCTURES. WHICH CAN BE SEEN WITHIN THIS QUOTES BELLOW. WHICH GOES INTO SOME OF THE FINDINGS OF A PREVIOUS STUDY THAT IT IS QUOTING WHERE SEVERAL FACILITIES THAT HAD DIFFERENT LAYOUTS WHERE STUDIED TO SEE WHERE PROBLEMS MAY OCCUR OR IF A CERTAIN LAYOUT LENDS ITSELF TO RESIDENTS BEING ABLE TO WAY FIND THROUGHOUT THE FACILITY.

"Results showed that residents who had longer routes (as in the communal homes) had more difficulty finding their way around. Also, the number of exit points from a route was correlated with the tendency of residents to get lost. Repetitive elements, such as a large number of doors in a corridor, were confusing as well. Simple decision points and a larger number of zones (places with different functions and meanings), such as were found in the group homes, supported residents' wayfinding abilities." (Gesine Marquardt, Dr-Ing, 2011, Pg. 6-7)

"AFTER ADMISSION TO GROUP LIVING UNITS WITH THREE DIFFERENT FLOOR PLAN DESIGNS: 14 WITH A CORRIDOR LIKE DESIGN, ONE WITH AN L-SHAPED DESIGN, AND THREE WITH A SQUARE OR H-SHAPED DESIGN. ALTHOUGH SYMBOLS FOR ORIENTATION WERE USED IN THE UNITS, THIS STUDY DEMONSTRATED THAT ARCHITECTURAL DESIGN INFLUENCES THE ABILITY TO ORIENT. RESIDENTS IN THE L-SHAPED FLOOR PLAN HAD LESS DISORIENTATION THAN THE OTHERS AT THE 6-MONTH FOLLOW-UP. AFTER 1 YEAR, THE RESIDENTS IN THE CORRIDOR-LIKE DESIGNED UNITS HAD MORE DYSPRAXIA, LACK OF VITALITY, AND DISORIENTATION OF IDENTITY. THE SPATIAL PROXIMITY OF THE KITCHEN, DINING ROOM, AND ACTIVITY ROOM IN THE L-, H- AND SQUARE-SHAPED UNITS WAS ALSO IDENTIFIED AS A SUPPORTIVE FEATURE." (GESINE MARQUARDT, DR-ING, 2011, PG. 7)

BOTH QUOTES SHOW HOW KEY LAYOUTS AND SPATIAL DESIGN IS THROUGHOUT LONG-TERM CARE FACILITIES IF THEY ARE GOING TO BENEFIT THEIR RESIDENTS AS WELL AS MAINTAIN A HIGHER STANDARD OF LIVING FOR THERE RESIDENTS AS WELL, WHICH IT STRESSED THROUGHOUT THIS SECTION OF THE DOCUMENT. THE ARTICLE THEN GOES INTO DETAIL ON WHICH LAYOUT IS THE MOST SUPPORTIVE OF THE ONES UTILIZED WITHIN THE STUDY. WHICH WAS THE L-SHAPED LAYOUT. THE ARTICLE THEN GOES TO EXPAND ON THIS THROUGH DISCUSSING KEY FEATURES OF LAYOUTS AND OVERALL ARCHITECTURE DESIGN THAT WHERE FOUND TO BE SUPPORTIVE WITHIN THIS LAYOUT AND WHAT WAS CONSIDER A HINDRANCE TO RESIDENTS BEING ABLE TO ORIENTATE OR FIND ONE'S WAY THROUGHOUT THE FACILITY. THIS CAN BE BEST SEEN IN THESE QUOTES WHICH GO INTO THESE FINDINGS.

"THE MOST IMPORTANT ARCHITECTURAL INFORMATION FOR WAYFINDING IN PEOPLE WITH ALZHEIMER'S DISEASE COMPRISES THE IDENTIFICATION OF REFERENCE POINTS AND PLACES. AN ARTICULATED AND DISTINCTIVE ARCHITECTURAL ENVIRONMENT, DIRECT VISUAL ACCESS TO THE COMMON ROOM, SIMPLE CIRCULATION ROUTES, AND SMALL-SCALE SETTINGS WERE IDENTIFIED AS SUPPORTIVE ARCHITECTURAL DESIGN FEATURES IN NURSING HOMES. MONOTONOUS, REPETITIVE ARCHITECTURAL FEATURES SUCH AS LONG, UNDIFFERENTIATED DOUBLE LOADED CORRIDORS INTERFERED WITH RESIDENTS' WAYFINDING ABILITIES." (GESINE MARQUARDT, DR-ING, 2011, PG. 8)

"Well-SUPPLIED EAT-IN KITCHENS WITH LARGE DINING TABLES WERE FOUND TO HAVE GREAT IMPORTANCE FOR RESIDENTS AS SPATIAL ANCHOR POINTS: MOST RESIDENTS, EVEN PEOPLE WITH SEVERE DEMENTIA, WERE ABLE TO LOCATE SUCH PLACES." (GESINE MARQUARDT, DR-ING, 2011, PG. 9)

THESE QUOTES HELP SHOW HOW THE CREATION OF ANCHOR POINTS AND CREATING AREAS THAT ARE FUNCTION AND WORK WITH THE STRUCTURE BUT ALSO NEED TO BE DISTINCTIVE SO THAT RESIDENTS WILL BE ABLE TO ORIENTATE THEMSELVES BASED ON THESE LOCATIONS. THE ARTICLE ALSO GOES INTO MORE DETAIL INVOLVING THESE ASPECTS OF DESIGN AND LAYOUTS TO HELP MAXIMIZES RESIDENT'S ABILITY FIND THERE WAY THROUGHOUT THE FACILITY. IT STATES THAT THROUGH THE USES OF MORE CUSTOMIZED DOORS FOR THERE PERSONAL ROOMS SUCH AS HAVING A DOOR WITH THE ABILITY TO HOLD THEIR PORTRAITS OF THEMSELVES OR BY HAVING A DISPLAY BOX NEXT TO THEIR DOOR FOR PERSONAL BELONGS OR PICTURES GREATLY HELPED WITH RESIDENCES BEING ABLE TO FIND ONE'S PERSONAL ROOM. IT ALSO SHOWED HOW DIRECT LINE OF SITE TO AREAS ALSO HELPS GREATLY IN SUCH SPACES BEING USED AND RESIDENTS BEING ABLE TO FIND SUCH SPACE, FOR EXAMPLE HAVING A COURTYARD NEXT THE DINNING OR LIVING ROOM MADE IT SO THAT RESIDENTS CAN FIND AND UTILIZE THE SPACE EASIER AS WELL AS FOR RESIDENTS TO FIND THERE WAY BACK OUT OF THE SPACE. THE DOCUMENT THEN WENT INTO USES OF SIGNAGE WITHIN FACILITIES TO HELP RESIDENTS FIND THERE WAY. BUT DID STATE THAT IT MAY CAUSE INFORMATION CLUTTER AS RESIDENTS WITH HIGHER STAGES OF DEMENTIA CANNOT GAIN THE NECESSARY INFORMATION FROM THE SIGNAGE, THOU IT WILL HELP RESIDENTS WITH LOWER STAGES OF DEMENTIA IF DONE PROPERLY. IT THEN WENT ON TO WARN AGAINST USING SIGNAGE ON THE GROUND AS IT MAY BE INTERPRETED AS ELEVATION CHANGES BY RESIDENTS.

THE FINAL PORTION TOUCHED BRIEFLY ON ARCHITECTURAL USE OF LIGHT AND COLOR FOR SUPPORTING RESIDENT'S ABILITY TO WAY FIND AND ORIENTATE ONESELF WITHIN A FACILITY. IT GOES INTO BRIEFLY THAT COLORS SHOULD BE CHOSEN CAREFULLY AS SLIGHT VARIATIONS IN COLOR MAY NOT BE SEEN BY RESIDENTS AS WELL AS COOLER COLORS CAN CAUSES MORE ISSUES FOR RESIDENTS THAN WARMER COLORS AS SHOWN IN THIS QUOTE.

"THE ABILITY TO DISCRIMINATE COLORS IS AFFECTED IN ALZHEIMER'S DISEASE, WITH MOST ERRORS IN THE BLUE AND GREEN AREAS AND FEWER IN THE YELLOW AND RED AREAS (WIJK, BERG, SIVIK, & STEHEN, 1999). VIVID COLOR CODING MAY ENHANCE SHORT-TERM MEMORY AND IMPROVE FUNCTIONAL ABILITY" (GESINE MARQUARDT, DR-ING, 2011, Pg. 10)

IT THEN GOES ON TO BRIEFLY TALK ABOUT LIGHT AND HOW IT AFFECTS RESIDENT'S ABILITY TO WAY FIND. IT STATES THAT SUFFICIENT LIGHT IS ONE OF THE KEY AREAS THAT BEST HELPS RESIDENTS FIND THEIR WAY TO DIFFERENT DESTINATIONS WITHIN THE FACILITY. IT STATES THAT 500LX FOR AMBIENT LIGHTING IS SUFFICIENT FOR RESIDENTS TO BE ABLE TO ORIENTATE THEMSELVES WITHIN A SPACE OR NAVIGATE THROUGHOUT A FACILITY. AS FOR TASK, IT STATES THAT 2000LX IS SUFFICIENT FOR RESIDENTS TO PERFORM DIFFERENT TASKS.

**MY THOUGHTS:** 

AS FOR MY OVERALL THOUGHTS ON THIS ARTICLE I FOUND MYSELF AGREEING MOST OF THE ARTICLE. SUCH AS HOW THE ARTICLE WENT ON TO STATE HOW SMALLER MORE COMPACT GROUP DWELLINGS WITH FEWER INDIVIDUALS SHOWED THE BEST RESULTS FOR RESIDENTS BEING ABLE TO NAVIGATE THE FACILITY WHICH WAS ALSO SHOWN IN THE PREVIOUS ARTICLE, I ALSO AGREE WITH ARTICLE ON HOW LAYOUTS SHOULD BE CREATED TO FORM DISTINCTIVE SPACES OR PERSONALIZING SPACES. AGREE WITH THIS DO TO PERSONAL INTERACTIONS WHEN VISITING MY GRANDPARENTS HOW THEY FIND IT DIFFICULT NAVIGATING LONG CORRIDORS OR SPACES WITH LARGE AMOUNTS OF TURNS THAT NEED TO BE MADE BUT CAN FIND THEIR WAY TO SOCIAL AREAS OR DINNING ROOM WITHIN THE FACILITY THAT THEY STAY AT. AS FOR THE PORTION ON LIGHTING AND COLOR | FIND MYSELF DISAGREEING ON THE COLOR ASPECT BECAUSE OF SEVERAL OTHER ARTICLES THAT I HAVE READ EITHER STATED THAT WARM AND COOL COLORS WHERE PERCEIVED NORMALLY FOR SOMEONE WITHIN THE AGE GROUP OF MOST PEOPLE WITH DEMENTIA OR STATED THAT IT WAS THE VARIATION OF COLORS THAT CAUSED ISSUES NOT WARM OR COOL COLORS IN GENERAL.

#### **CONCLUSION:**

OVERALL, THIS ARTICLE IS VERY USEFUL FOR THE DESIGNING OF OUR OWN LONG-TERM CARE FACILITY AS IT GAVE US A LOT OF STUDIES TO GO OVER TO GAIN MORE INSIGHT FOR OUR OVERALL DESIGN AS WELL AS IT WENT OVER MANY ASPECTS THAT GREATLY AFFECTED OUR OWN DESIGN. SUCH AS OVERALL SIZE OF INDIVIDUAL GROUPS OF RESIDENTS, THE PLACEMENT OF KEY SPACES SUCH AS THE KITCHEN, DINING ROOM, LIVING ROOM, BEDROOMS, AS WELL AS OTHER SOCIAL AREAS AND COURTYARDS. WE ALSO FOUND THAT THE ARTICLE IS VERY HELPFUL IN HOW IT WENT INTO GREAT DEPTH ON CIRCULATION FOR LONG TERM CARE FACILITIES AND HOW CIRCULATION GREATLY AFFECTS RESIDENT'S ABILITY TO DRIENTATE AS WELL AS FIND ONE'S WAY AROUND A FACILITY TO GET TO THEIR DESTINATION WITHOUT THE NEED FOR A NURSE OR OTHER STAFF MEMBER TO TAKE THEM TOO AND FROM THESE SPACES WHICH IN TURN FREES UP STAFF TO PERFORM OTHER DUTIES ALONG WITH GIVING THE RESIDENTS A BETTER SENSE OF FREEDOM AND HIGHER QUALITY OF LIFE. EVEN THOU WE DID END UP NOT AGREEING WITH THE PORTION OF THE ARTICLE DEDICATED TO COLOR DUE TO IT CONTRADICTING OTHER ARTICLES THAT WE HAVE READ FOR THIS PROJECT WHERE THIS ARTICLE STATED COOL COLORS MAY CAUSE PROBLEMS FOR RESIDENTS WHILE OTHER SOURCES THAT WE READ HAVE NOT SAID ANYTHING ABOUT THAT. BUT OVERALL, THE ARTICLE WAS EXTREMELY HELPFUL FOR OUR PROJECT EXPLICITLY THE LAYOUT AND CIRCULATION FOR OUR OWN LONG-TERM CARE FACILITY.

#### LITERATURE REVIEW 3

ARTICLE:

DESIGNING ENVIRONMENTS FOR PEOPLE WITH DEMENTIA

AUTHOR:

ALISON BOWES, ALISON DAWSON

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#### INTRODUCTION:

THIS BOOK PROVIDES A BRIEF OVERVIEW OF SEVERAL MAJOR ASPECTS OF DESIGNING FOR THOSE SUFFERING FROM DEMENTIA. IT DOES THIS THROUGH COMPILING SEVERAL DIFFERENT ARTICLES AND GOING THROUGH THEIR FINDINGS IN SEVERAL DIFFERENT FIELDS SUCH AS RESTROOMS, KITCHENS AS WELL AS OUTDOOR SPACES AND OTHER ASPECTS SUCH AS THE USES OF TECHNOLOGY USED THROUGHOUT SUCH FACILITIES. SO, FOR THIS REVIEW WE WILL BE GOING OVER AND DISCUSSING THIS BOOK BY GOING OVER SOME OF THE FINDINGS THAT THEY HAVE COMPLETED AND REVIEWED THROUGH OUT THE WORK, WE WILL DO THIS BY GOING OVER AND ANALYZING SEVERAL OF THESE SECTIONS WHICH ARE THE ONES CONCERNING BATHROOMS, TECHNOLOGY WITHIN THESE FACILITY AND FINALLY DUTDOOR SPACES. AFTER GOING OVER THESE SECTIONS WE WILL GIVE OUR THOUGHTS ON THE SECTION AND FINALLY PROVIDE A SUMMARY OF OUR THOUGHTS AND ANALYZATION AS WELL AS DISCUSSES HOW THIS BOOK WILL AFFECT OUR OWN PROJECT.

**DISCUSSION / ANALYZATION:** 

SO, TO BEGIN, THE PORTION OF THE BOOK THAT DISCUSSED PAPERS AND THEIR FINDINGS ON BATHROOMS AND WHAT WAS THEIR SOLUTIONS OR RECOMMENDATIONS FOR BATHROOMS WITHIN LONG-TERM CARE FACILITIES. THE BOOK ITSELF STATED THAT THERE WHERE FEW STUDIES THAT TOOK INTO CONSIDERATION OF BATHROOMS OR FOCUSED GREATLY ON THEM THESE STUDIES WHERE DONE IN 2010 BY BURTAN AND SHEEHAN WHICH STATED THAT MORE ACCESSIBLE BATHROOMS IS VERY IMPORTANT TO RESIDENTS. IN THE FORM OF MORE SPACE AND ACCESS TO TOILETS AND OTHER FIXTURES. THE OTHER MAJOR STUDIES FOUND IN THIS SECTION SUCH AS THE ONE DONE BY BOGER IN 2013 WHICH STUDY HAND WASHING FOR RESIDENTS FOUND THAT MORE FAMILIAR STYLES OF SIGNAGE HAD AN INCREASE EFFECT FOR RESIDENTS TO FIND AND USES THE FACILITY COMPARED TO NEWER OR UNIQUE SIGNS, AS FOR THE FINAL MAJOR ARTICLE THAT FOCUSED ON SIGNAGE FOR RESTROOMS THEMSELVES THIS WAS DONE IN 1995 BY WILKINSON. WHERE THEY STUDIED SEVERAL HOSPITALS AND NURSING HOMES AND FOUND THAT FOR RESIDENTS WITH MODERATE DEMENTIA THAT A SIGN WITH THE WORD TOILET AND A PICTURE OF A TOILET WORKED BEST COMPARED TO THE STANDARD SIGN OF A MAN OR WOMEN THAT IS MOST COMMONLY USED. WITH THEIR STUDY RECOMMENDING THAT BOTH THE PICTURE AND WORD FOR THE SPACE BE USED WHEN CREATING SIGNAGE FOR PLACES LIKE RESTROOMS.

**MY THOUGHTS:** 

As for my thoughts on this section I found it Quite interesting on how little there has been for studies done on this subject compared to other portions and subjects throughout the book. The few articles that where mention and briefly summarized within the text I did find helpful such as the one involving signage or for the creation, such as sizing for the space as the one article stated that accessible bathrooms where of the up most importance for residents. Though I do wish the article went into more detail of these studies for this section. But overall, I do agree with what is stated within this section.

**DISCUSSION / ANALYZATION:** 

AS FOR THE SECOND SECTION OF THIS BOOK, WHICH WAS ABOUT TECHNOLOGY AND ITS USES WITHIN A LONG-TERM CARE FACILITY. THE TEXT STATED THAT THERE WHERE SEVERAL STUDIES THAT WHERE DONE INVOLVING TECHNOLOGY TO SUPPORT RESIDENTS WITHIN LONG-TERM CARE FACILITIES, THOU IT DID STATES THAT MANY OF THESE STUDIES WHERE EXPERIMENTAL IN NATURE AND MOST WHERE ONLY PROOF OF CONCEPT INSTEAD OF USE WITHIN A REAL WORLD SETTINGS. AS FOR THE ONES THAT TOKE PLACES WITHIN REAL WORLD SETTINGS SUCH AS ONE BY CHANG IN 2010 WHICH WAS A TEST OF A DEVICES THAT USED RFID TAGS SPREAD THROUGHOUT A SPACE OR FACILITY THAT WOULD THEN PROMPT INDIVIDUALS WITH NAVIGATIONAL DIRECTIONS, THIS SYSTEM THEY FOUND DID WORK BUT VARIED GREATLY BETWEEN RESIDENTS FOR HOW EFFECTIVE IT WAS. THIS WITHIN THE TEXT WAS SHOWN TO BE A VERY SIMILAR OCCURRENCES BETWEEN ALL THESE SYSTEMS. WITHIN THIS PORTION THERE WAS ANOTHER STUDY THAT FOCUSED ON ASSISTIVE DEVICES FOR INDIVIDUALS WITH DEMENTIA AND FOUND THAT THERE WAS SUPPORT FOR DEVICES THAT HELPED WITH ENGAGEMENT AND ENTERTAINMENT AS WELL AS PERSONAL HYGIENE THOUGHT THERE WAS CONCERN DO TO INDIVIDUALS' CAPACITY TO USE SUCH DEVICES AS WELL AS PRIVACY CONCERNS. THIS WAS SHOWN WITHIN ANOTHER ARTICLE BY CASAS, MARCO, FALCO, ARTIGAS, ABASCAL WHICH SHOWED THAT THROUGH A MONITORING SYSTEM WITHIN A FACILITY IN SPAIN THERE WAS CONCERN OF ETHICAL ISSUES DUE TO THE CONTINUED MONITORING OF INDIVIDUALS WITHIN THE FACILITY.

**MY THOUGHTS:** 

As for my thoughts on this section I found it interesting as many of these studies shown devices that could possibly be very helpful and greatly improve residents of long-term care facilities and those suffering from dementia and Alzheimer's day to day lives. Though that brings into play a great number of ethical issues and privacy concerns as I feel for these systems to work it would mean residents would need to be monitored greatly which I feel would lead to possible abuses of these systems. So even though these systems seem very helpful I believe that their helpfulness is out weighted by the ethical issues that come with them.

**DISCUSSION / ANALYZATION:** 

AS FOR THE FINAL PORTION THAT WILL BE DISCUSSED ABOUT THIS TEXT IS THE PORTION ON EXTERIOR SPACES AS MANY OF THE OTHER ARTICLES THAT THAT HAVE BEEN WENT THROUGH DID NOT DISCUSS THIS ASPECT OF DESIGN IN DETAIL. THE TEXT THOUGH BRIEF DID GO OVER SEVERAL STUDIES THAT WENT IN DEPTH OF HOW OUTDOOR SPACES CAN HELP RESIDENTS ONE SUCH STUDY WAS DONE BY DETWEILER, MURPHY, MYERS, AND ASHAI IN 2008 AND 2009 FOUND THAT WANDER GARDENS AND OTHER EXTERIOR SPACE THAT RESIDENTS HAD ACCESS TO LED TO A DECREASE IN FALLS AND NEED FOR MEDICATION. THIS WAS ALSO SHOWN IN AN EARLIER STUDY BY MOONEY AND NICELL IN 1992 WHICH FOUND THAT EXTERIOR SPACES AND THERE USES BY RESIDENTS CAUSED A DECREASE IN INCIDENTS AND AGGRESSIVE BEHAVIOR. THOUGHT THERE ARE NEGATIVES TO EXTERIOR SPACES THAT WHERE ALSO BROUGHT UP SUCH AS FOR THE SPACE TO HAVE BENEFITS IT MUST BE USED REGULARLY AS WELL AS NOT BE OVERLY COMPLEX. THERE WHERE ALSO PROBLEMS WHEN IT CAME TO INTEGRATING PUBLIC SPACES INTO DESIGNS AS RESIDENTS CAN BECOME CONFUSED OR AGITATED VERY EASILY IN THESE AREAS AND GREAT CARE MUST BE DONE IF YOU ARE GOING TO INTEGRATE THESE SPACES AS PUBLIC AREAS.

**MY THOUGHTS:** 

OVERALL, THIS SECTION I FOUND VERY HELPFUL AS WELL AS IT ECHOED MUCH OF WHAT I READ IN OTHER ARTICLES ABOUT THE BENEFITS FOR OUTDOOR SPACES AND ITS USE FOR RESIDENTS ESPECIALLY THOSE THAT ARE SUFFERING FROM DEMENTIA OR ALZHEIMER'S. I ALSO FOUND IT HELPFUL AS IT BROUGHT UP CONCERNS SUCH AS THE CONCERN INVOLVING CREATING A PUBLIC SPACE FOR RESIDENTS TO ALSO USE AS I HAVE NOT THOUGH MUCH ABOUT THAT ASPECT OF THE SPACE OR READ ABOUT SUCH CONCERN IN OTHER ARTICLES WHICH WILL LEAD ME TO DO MORE RESEARCH ON THIS TOPIC. OVERALL, I FOUND THIS SECTION VERY HELPFUL.

#### CONCLUSION:

Overall, this text helped us a great deal with the creation of our own long term care facility. It has done this through bring our attention to different aspects that we have not though of yet as well as provide ourselves with a sort of overview of these aspects and articles to utilizes in furthering our research. As for how it will impact the design, it will do that in several ways such as with signage and how it should utilize text and images for labeling areas along with other aspects such as possible planning for outdoor spaces to be more private in nature while still connecting to the rest of the neighborhood. Though we did not agree with every aspect of the text such as possible monitoring systems within these facilities which can be seen as a major privacy and ethical issues. This text still provides us with a great deal of information form project.

LITERATURE REVIEW 4

ARTICLE:

DESIGNING FOR ALZHEIMER'S DISEASE

AUTHOR:

ELIZABETH C. BRAWLEY

#### INTRODUCTION:

THIS BOOK IS VERY HELPFUL IN MANY ASPECTS. THOUGH THIS BOOK IS MORE OF A TEXTBOOK AS IT GOES INTO MORE REQUIREMENTS AS WELL AS CURRENT THEORY AND PRACTICES FOR CREATING DESIGNS AND LAYOUTS FOR THOSE SUFFERING FROM DEMENTIA AND ALZHEIMER'S. THEREFORE, INSTEAD OF GOING OVER DIFFERENT SECTIONS OR ASPECTS OF THE BOOK LIKE WAS DONE FOR THE OTHER TEXTS WITHIN THESE REVIEWS. WE INSTEAD WILL DO QUICK SUMMARY OF THE ENTIRE BOOK AND TOUCH ON MAJOR ASPECTS THAT IT INCLUDES WITHIN ITS TEXT. WE WILL THEN GIVE OUR OVERALL THOUGHTS ON THE TEXT BEFORE PROVIDING A CONCLUSION WHERE WE WILL STATE HOW IT WILL AFFECT OUR OVERALL DESIGN PROCESS.

**DISCUSSION / ANALYZATION:** 

SO, TO BEGIN A QUICK OVERVIEW OF THE MAJOR SECTIONS THAT ARE LOCATED WITHIN THE TEXT AND THEN PROVIDE A BRIEF OVERVIEW OF EACH. THE FIRST SECTION WITHIN THE TEXT IS CALLED AGING AND ALZHEIMER'S DISEASE, THIS SECTION COVERS MANY ASPECTS SUCH AS AGING AND DIFFERENT ISSUES THAT WILL ARRIVES AS PEOPLE AGE. IT THEN MOVES INTO A CLOSER LOOK ON ALZHEIMER'S AND HOW IT EFFECTS PEOPLE AND THEIR ABILITY TO FUNCTION WHILE DOING DAY TO DAY TASK, IT ALSO TOUCHES ON ALZHEIMER'S IMPACT OF FAMILY BEFORE GOING INTO CURRENT CRITERIA FOR DESIGNING CARE FACILITIES AS WELL AS POSSIBLE ENVIRONMENTAL DESIGN CAN AFFECT ALZHEIMER'S BEFORE FINISHING THIS SECTION ON GOALS DESIGNERS SHOULD STRIVE FOR WHEN DESIGNING A LONG-TERM CARE FACILITY.

THE SECOND SECTION OF THE BOOK DIVES MORE INTO THE ENVIRONMENTAL ASPECTS OF DESIGN THAT SHOULD BE TAKEN INTO CONSIDERATION SUCH AS LIGHTING AND HOW AS WE CHANGE WITH AGE OUR NEED FOR LIGHTING CHANGES. THIS SECTION ALSO DIVES INTO COLOR AND ITS POSSIBLE USES AND EFFECTS FOR DESIGNING A CARE FACILITY. IT THEN TOUCHES ON HEARING AND ACOUSTIC CONSIDERATIONS FOR RESIDENTS AS WELL AS HOW TEXTURE SHOULD BE UTILIZED WITH DESIGN. ALSO WITHIN THIS PORTION OF THE TEXT IS A CHAPTER DEDICATED TO AN IN-DEPTH LOOK AT WAYFINDING DESIGN PRACTICES WHICH CAPS THIS SECTION. AS FOR THE FINAL TWO SECTIONS THE FIRST ONE DEALS WITH AN IN-DEPTH LOOK AT CREATING A FEELING OF AND CREATION OF SPACE FOR THERAPEUTIC NEEDS BOTH INDOORS AND OUT. THE FINAL PORTION IS TOUCHING ON FINISHES FOR THE CEILING, WALLS, AND WINDOWS AS WELL AS FURNITURE THAT SHOULD BE USED. THE LAST CHAPTER OF THE BOOK IS THEN DEDICATED TO GOING OVER WHO YOU WOULD WANT ON A DESIGN TEAM WHEN TACKLING A PROJECT SUCH AS THIS.

**MY THOUGHTS:** 

Overall, this book I found very helpful, do to how it gives us the in-depth look in many of the common design practices for designing a long-term care facility such as the one we are going about creating. This book also gave us a good foundation for starting our design and as a starting point we can build upon with the other articles and books that we have read for creating this facility. Thou I do have one complaint about this book and that is its age, this text was created in 1997 making it a couple of years past 20 as of the creation of this project, this means that it does not consider many of the improvements as well as our further understanding of dementia and Alzheimer's. Thou this does not mean this text should be discarded as it has laid the foundation for this project to allow us to build upon with newer articles and information.

#### CONCLUSION:

THIS BOOK I WOULD SAY PROVIDE OUT OF ALL THE OTHER TEXTS AND ARTICLES THE MOST USEFUL INFORMATION AND HAS INFLUENCED THE OVERALL DESIGN PROCESS THE MOST AS IT GAVE US MUCH OF THE GROUNDWORK TO START THE DESIGN SO WE COULD INCORPORATE THE CONCEPTS FROM THE OTHER TEXTS AND HAVE A BASE FOR WHAT THESE TEXTS AND ARTICLES WHERE TALKING ABOUT AND REFERENCING WITHIN THEIR WORK. OVERALL, THIS TEXT I FEEL WILL HELP US THE MOST DURING THE DESIGN PROCESS FOR THIS PROJECT.

THROUGHOUT THESE FOUR ARTICLES WE HAVE GAIN QUIET ABET OF UNDERSTANDING ON MANY OF THE DIFFERENT ASPECTS AND PROBLEMS OR SOLUTIONS THAT CAN BE UTILIZES OR ENCOUNTERED THROUGHOUT THE DESIGNING OF A LONG-TERM CARE FACILITIES. THESE ARTICLES EVEN IF WE DID NOT AGREE WITH ALL ASPECTS OF EACH, NEVER LESS GAVE US MANY DIFFERENT SOLUTIONS AS WELL AS APPROACH IN WHICH TO GO ABOUT CREATING OUR OWN PROJECT WHICH WE WISH TO EXPAND OUR UNDERSTANDING OWN WHAT ASPECTS OF ARCHITECTURE AS WELL AS DESIGN IN GENERAL CAN BE USED TO BETTER HELP THOSE SUFFERING FROM DEMENTIA OR ALZHEIMER'S AS WELL AS OTHER PHYSICAL OR MENTAL DISEASES CAUSED BY THE RAVAGES OF OLD AGE. WHILE MANY OF THESE SOLUTIONS AND IDEAS DO OVERLAP FROM THESE FOUR ARTICLES AS WELL AS FROM OTHER ARTICLES AND BOOKS FROM OTHER RESEARCH DOCUMENTS, WE WILL GO OVER THESE FOUR ARTICLES AND WHAT WE HAVE GAINED FROM EACH AND HOW IT WILL AFFECT THEOVER-ALL DESIGN AND PROGRAMING OF THE PROJECT.

SO, WE WILL QUICKLY GO OVER THE FIRST ARTICLE WHICH WAS "HOW ARCHITECTURAL DESIGN AFFORDS EXPERIENCES OF FREEDOM IN RESIDENTIAL CARE FOR OLDER PEOPLE" AND I WILL DESCRIBE WHAT WE HAVE GAINED FROM THIS ARTICLE AND HOW IT WILL AFFECT THE OVERALL DESIGN OF THE PROJECT. TO BEGIN THIS ARTICLE GAVE US A LARGE AMOUNT OF UNDERSTANDING AND INSIGHT INTO WHAT RESIDENTS FEEL OR LIKE ABOUT CERTAIN ASPECTS OF LONG-TERM CARE FACILITIES. WHO ARE FOLLOWING MANY OF THE DIFFERENT TECHNIQUES THAT ARE BEING USED WITHIN FACILITY FOR PEOPLE WITH DEMENTIA OR ALZHEIMER'S, I SAY THIS BECAUSE THIS ARTICLE SHOWED HOW FREEDOM AND INDEPENDENCE FOR RESIDENTS IS HEAVILY DEPENDENT ON SIZE AND LAYOUT OF THE FACILITY AS WELL AS THE SIZE AND ARRANGEMENT OF ROOMS BUT ALSO INDIVIDUAL RESIDENTS AND THEIR ABILITY TO FORM CONNECTIONS TO OTHER RESIDENTS OR CAREGIVERS AS WELL AS FORMING CONNECTIONS TO THE OUTDOORS, WHICH CAN BE SEEN THROUGHOUT THE ARTICLE IN THE FORM OF HOW THE DWELLINGS ARE DESCRIBE AS HOME LIKE BY MANY RESIDENTS AS WELL AS RESIDENTS LIKE THE ABILITY TO HAVE THERE OWN PRIVATE ROOMS THAT THEY CAN DECORATE AS THEY SEE FIT.

OR HOW HAVING SMALLER GROUPS OF RESIDENTS SHARING DINNING ROOMS, KITCHENS, AND SOCIAL AREAS GRANTS MANY OF THE RESIDENTS MORE SPACE WHICH MANY APPRECIATE BUT ALSO ALLOWS CAREGIVERS TO BE MORE PERSONAL WITH EACH RESIDENT AND HAVE THE FACILITY OPERATE AS MORE OF A HOME THAN A MEDICAL FACILITY WHICH IS MORE REGIMENTED. FINALLY, THIS ARTICLE SHOWED US HOW NATURE IS OF GREAT IMPORTANCE TO RESIDENTS. WITH MANY WANTING ROOMS WHERE YOU CAN LOOK OUT INTO GARDEN AREAS OR ON TO RESIDENTIAL STREETS. WHILE ALSO MANY WISHE FOR AREAS WHERE THEY CAN STROLL OR SIT IN AND ENJOY NICE WEATHER.

OVERALL, THIS ARTICLE INFLUENCED THE PROJECT QUIET ABET, IT DID THIS THROUGH PUSHING US TOWARDS SMALLER GROUPINGS OF RESIDENTS AROUND 10 TO 12 RESIDENTS SHARING A DWELLING UNIT WITH ITS OWN FACILITIES INSTEAD OF THE MORE TRADITIONAL LONG TERM CARE FACILITY. THIS ARTICLE ALSO BEGAN STEERING US AWAY FROM THE MORE TRADITIONAL LARGE BUILDING THAT WE WERE ORIGINALLY LEANING TO AND INSTEAD HAS US LEANING TOWARDS A MORE RESIDENTIAL STYLE STRUCTURE OR POSSIBLE SEVERAL SPERATE STRUCTURES WITHIN A LARGER COMPOUND THOUGH WE MAY NEED TO INVESTIGATE THIS MORE DUE TO THE NATURE OF THE WEATHER WITHIN NORTH DAKOTA. THE OTHER MAJOR PLACES THIS ARTICLE AFFECTED THE OVERALL DESIGN WAS THROUGH THE USE OF NATURE AND HOW WE SHOULD GO ABOUT UTILIZING LANDSCAPING THROUGHOUT THE PROJECT. THE REASON FOR THIS EVEN THOUGH THE ARTICLE DID NOT GO INTO DETAIL WAS DO TO HOW MANY OF THE RESIDENTS INTERVIEWED WITHIN THE ARTICLE BROUGHT UP THE ABILITY TO GO OUTSIDE WHEN THEY PLEASED WHICH WE FOUND INTERESTING. So, THIS GOT US WONDERING ON THE POSSIBILITIES OF INTEGRATING A GARDEN OR WALKING PATHS THROUGH OUT THE SITE FOR RESIDENTS TO LOOK OUT AT OR GO FOR A STROLL OR SIT WHILE MAINTAINING SAFETY FOR THE RESIDENTS. BUT OVERALL, THIS ARTICLE STARTED OUR THOUGH PROCESS TO TRY DIFFERENT SOLUTIONS THEN WHAT WE WERE PREVIOUSLY CONSIDERING.

AS FOR THE SECOND ARTICLE THAT WAS REVIEWED WITHIN THIS LITERATURE REVIEW WHICH WAS "WAYFINDING FOR PEOPLE WITH DEMENTIA: A REVIEW OF THE ROLE OF ARCHITECTURAL DESIGN". THIS ARTICLE GAVE US A MUCH APPRECIATED UNDERSTANDING OF LAYOUTS AND MORE TECHNICAL QUESTIONS THAT WE HAD FOR HOW TO CREATE AND LAYOUT A LONG-TERM CARE FACILITY. THESE TECHNICAL ASPECTS THAT THIS ARTICLE GAVE US AN UNDERSTANDING OF, WAS OF LAYOUTS FOR CORRIDORS AND OVERALL LAYOUTS THAT LEND THEMSELVES TO RESIDENTS BEING ABLE TO NAVIGATE OR ORIENTATE THEMSELVES SO RESIDENTS CAN BE ABLE MOVE ABOUT A FACILITY ON THEIR OWN WITH LITTLE OR NO ASSISTANCE FROM CAREGIVERS OR OTHER STAFF MEMBERS. THE OTHER MAJOR ASPECTS THAT IS ARTICLE HELPED WITH WAS SPACE **DRIENTATION AND LOCATIONS SUCH AS HAVING SINGLE DINNING AREAS** WITH KITCHENS ATTACHED TO ALLOW RESIDENTS TO UTILIZE THE SPACE AS AN ANCHOR POINT TO BE ABLE TO NAVIGATE THE FACILITY FROM. OR HOW TO CREATE SOCIAL AREAS OR NURSE STATIONS AS WELL AS ONE'S OWN ROOM TO BE DISTINCTIVE BUT NOT OVER BARING OR OVER STIMULATING THROUGH UNNECESSARY SIGNAGE, ADD FINALLY THIS ARTICLE HELPED REINFORCES ASPECTS OF THE FIRST ARTICLES IN THE FORM OF HAVING SMALLER GROUPINGS OF RESIDENTS AS WELL AS SMALLER OVERALL DWELLINGS TO CREATE AS SHORT OF PATHS TO DESTINATIONS AS POSSIBLE TO LIMIT THE POSSIBILITY OF RESIDENTS GETTING LOST ON THEIR WAY TO THEIR DESTINATIONS.

OVERALL, THIS ARTICLE HELPED US GREATLY WITH SEVERAL MAJOR ASPECTS OF THE PROJECT AS WELL AS OUR UNDERSTANDING OF THESE PORTIONS OF THE PROJECT. THE FIRST MAJOR PORTION OF THE PROJECT THAT THIS ARTICLE HELPED WITH WAS OUR OVERALL LAYOUT WHICH WAS ORIGINALLY GOING TO BE A LARGER STRUCTURE THAT IS RADIALLY LAID OUT BUT AFTER GOING OVER THIS ARTICLE AND SEVERAL OTHERS IT WILL MOST LIKELY NOW BE SEVERAL SMALLER STRUCTURES WITH A MORE OPEN PLAN ALLOWING RESIDENTS TO VISUALLY SEE WHERE THEY NEED TO GO AS MUCH AS POSSIBLE OR WHERE THERE NEEDS TO BE A CORRIDOR IT WILL BE AS SHORT AS POSSIBLE WITH THE NO TURNS IF POSSIBLE AS WELL AS THE DESTINATION OR ROOMS ALONG THE CORRIDOR WILL BE AS DISTINCTIVE AS POSSIBLE WITHOUT OVERLOADING THE RESIDENTS WITH TOO MUCH INFORMATION THAT IS UNNEEDED. AS FOR SOME OF THE OTHER ASPECTS THAT THIS ARTICLE TALKED ABOUT THAT INFLUENCED OUR THOUGHT PROCESS FOR THE PROJECT IS THROUGH SPACES AND THEIR PLACEMENT THROUGHOUT THE STRUCTURE. WE SAY THIS BECAUSE IT MADE US THINK MORE ON HOW WE CAN BRING THE SPACES WITHIN THE FACILITY THAT THE RESIDENTS USE TO BE AS CLOSE TOGETHER AS THEY CAN TO ALLOW THE RESIDENTS TO BE ABLE TO ACCESS THEM WITH OUT HAVING TO TRAVEL LONG DISTANCES. WHILE ALSO MAKING SURE THAT THESE SPACES DO NOT HINDER EACH OTHER THUS DIMINISHING THEIR OVERALL VALUE TO THE RESIDENTS. FINALLY, THIS ARTICLE HAS US GOING OVER POSSIBILITIES FOR CREATING DISTINCTIVE SPACES TO BE UTILIZES AS ANCHOR POINTS FOR THE RESIDENTS WHILE KEEPING THEM PLEASANT TO BE IN AND FITTING IN WITH THE OVERALL AESTHETIC OF THE FACILITY.

As for the third article Designing Environments for People with Dementia. Thou shorter in scope as well as less detailed than the others, it still provides us with a great deal of information along with many other articles to look into for finding more detailed information regarding different aspects such as restrooms or signage that can be used and other aspect that we did not have time to discuss in the article above. Thou the article did not directly influences much of the for design that we have finished as of now it did help suggest many different aspects that we will have to consider latter within this project.

OVERALL, THIS ARTICLE HELPS US GREATLY IN THE PLANNING AND GATHERING OF OTHER SOURCES TO HELP US RESEARCH MORE TECHNICAL ASPECTS OF THE DESIGN THAT WE HAVE HAD TROUBLE LOCATING INFORMATION OWN. SO, EVEN THOUGH WE DO NOT AGREE WITH EVERY ASPECT OF THIS BOOK IT IS STILL VERY HELPFUL AND HAS GREATLY IMPROVED THE DESIGN AND ITS OVERALL PROCESS.

For the final article that was reviewed within this section which was Designing for Alzheimer's Disease by Elizabeth C. Brawley. we will just reiterate what was stated above which is that this book provides much of the groundwork for our overall thought process and design aspects for the creation of a long-term care facility. It has given us much of our understanding for designing such a facility and overall, we feel it has influenced the process the most out of all the other articles and texts that we have looked at so far. Do to how it dives in depth on many of the key subjects for the design process, while giving guidance on aspects that should and should not be utilized when designing such a facility.

To wrap this summary of this literature review. These articles where very helpful in their own wright as each one repeated some aspects of each other as well as provide excellent information and possible solution and testaments from resident living within facilities that utilizes many of these features within there own facilities. Overall, even though these articles are very useful even if we may not agree with every aspect of what they have to say, they will greatly influence the project as well as showed us there is much more, we must research to create the best possible solution for this problem.

#### **RESEARCH SUMMARY**

THE FOCUSES OF THIS RESEARCH WERE TO COMPILE A COMPREHENSIVE LIST OF MAJOR ELEMENTS AND AREAS OF CONCERN FOR DESIGNING AND CREATING A LONG-TERM CARE FACILITY THAT SPECIALIZE IN MEMORY CARE. THIS WAS DONE BY PUTTING EMPHASES ON LAYOUT OF FACILITY'S AND HOW THEY EFFECT RESIDENTS BOTH POSITIVELY AND NEGATIVELY. THIS WAS ALSO DONE IN AREAS SUCH AS FINISHES THAT WILL BE UTILIZED, ALONG WITH ENVIRONMENTAL ASPECTS SUCH AS LIGHT, ACOUSTICS, AND SMELL. AS WELL AS THE NATURAL ENVIRONMENT AND ITS EFFECTS ON RESIDENTS.

#### **RESEARCH SUMMARY**

WITH THE FINDINGS IN THESE AREAS SHOWING THAT ASPECTS SUCH AS LAYOUTS SHOULD BE APPROACHED WITH LAGER ROOMS WITH A MORE COMPACT DESIGN WITH FINISHES THAT ARE NOT OVER BARING BUT MORE RESIDENTIAL IN NATURE ALONG WITH AN EMPHASIS ON DIRECT LINE OF SITE TO SPACES AND CREATING SAID SPACES INTO LANDMARKS FOR RESIDENTS TO USE WILL NAVIGATING THE FACILITY. WITH LIGHTING BEING PLENTIFUL WITHIN THE SPACES BOTH NATURAL AND ARTIFICIAL LIGHTING. ALONG WITH ACOUSTICS BEING DONE IN SUCH A WAY TO MAXIMIZE HEARING AS WELL AS DIMMISH ECHDES AS MUCH AS POSSIBLE. SMELLS SHOULD BE PLEASANT BUT NOT OVERBEARING IN NATURE, WITH THE FINAL ELEMENT OF THE NATURAL ENVIRONMENT BEING SHOWN AS CRUCIAL IN THE FROM OF ALLOWING RESIDENTS TO BE WITHIN AND VIEW THE NATURAL ENVIRONMENT AS MUCH AS POSSIBLE WHILE IMPLEMENTING DESIGN CONSIDERATIONS THAT WHERE USED WITHIN THE LAYOUT OF THE FACILITY TO MAXIMIZE THE EFFECTIVENESS OF THE OUTDOOR SPACES AND PROVIDING A SAFE EXPERIENCE FOR RESIDENTS. WITH THE OVERARCHING GOAL TO CREATE A FACILITY THAT WILL ALLOW RESIDENTS TO NAVIGATE AND PERFORM TASKS AND HOBBIES IN THAT ACTS AND FEELS LIKE A NEW HOME FOR THEM WILL PROVIDING THEM WITH THE ABILITY TO REMAIN INDEPENDENT FOR AS LONG AS POSSIBLE.

THE CREATION OF A LONG-TERM CARE FACILITY THAT SPECIALIZES IN CARE FOR THOSE SUFFERING FROM MENTAL DECLINE THAT COMES WITH AGE OR ALZHEIMER'S AND DEMENTIA. I FEEL IS OF GREAT IMPORTANCE TO OUR IMMEDIATE COMMUNITIES AS WELL AS SOCIETY AS A HOLE DO TO HOW, WITH THE INCREASING AGING POPULATION IN NEED OF CARE AS WELL AS WITH THE INCREASE OF THIS POPULATION THERE IS AN INCREASE OF PEOPLE SUFFERING FROM THESE DISEASES. BY CREATING A FACILITY SUCH AS THE ONE PROPOSED THROUGH THIS PROJECT. WE WOULD BE ABLE TO BETTER UNDERSTAND POSSIBLE WAYS TO HELP PEOPLE SUFFERING WITH THESE DISEASES, LIVE A MORE FULFILLING LIFE WHILE STAYING AT THESE FACILITIES. THIS PROJECT WILL ALSO BE ABLE TO SHOW HOW OUR CURRENT UNDERSTANDING OF THESE FACILITIES CAN BE COMBINED WITH NEWER INFORMATION BEING PRESENTED AS WELL AS WITH INPUT FROM RESIDENTS OF THESE FACILITIES, TO ALLOW US TO CREATE A FACILITY THAT WILL BEST SUPPORT THE RESIDENTS OF THESE FACILITIES.

ECONOMICALLY I FEEL THAT THIS PROJECT IS WORTH ITS PRICE, AS IT WILL CONTRIBUTE GREATLY TO SOCIETY BY PROVIDING CARE FOR ITS RESIDENTS AS WELL AS PROVIDING A SAFE PLACE FOR SOME OF THE MOST VULNERABLE PEOPLE IN SOCIETY. WITH THIS PRICES WHICH MAINLY COMES FROM THE SITE WHICH ITSELF IS AN UNDERUSED PIECE OF LAND LOCATED WITHIN GRAND FORKS WHICH IS IN NEED OF A FACILITY FOR ITS RESIDENTS, WITH THIS I FIND THAT ITS COST FOR THE SITE AS WELL AS TO UTILIZES THE SITE ITS SELF WILL BE WORTH ITS OVERALL COST. AS FOR WHERE MOST OF THE FUNDS FOR THIS TYPE OF PROJECT WILL BE COMING FROM IT WILL MOST LIKELY COME FROM RENT AND COST OF SERVICES FOR THE RESIDENTS AS WELL AS FROM POSSIBLY STATE OR GOVERNMENT FUNDING FOR THIS FACILITY, WHICH IF THIS IS THE CASE THEN THE FACILITY WILL BE ABLE TO OPERATE AND PROVIDE THESE SERVERS TO ITS RESIDENTS WHILE ALSO MAINTAINING LOWER PRICES FOR SUCH SERVICES WITH THE HELP OF STATE OR GOVERNMENT FUNDING. AS FOR RETURNS ON INVESTMENT FOR THIS FACILITY MOST OF THESE RETURNS WILL NOT BE MONETARY AS THE FACILITY WILL MOST LIKELY BE OPERATING AT A BREAK EVEN AMOUNT OR SLIGHTLY BETTER. MOST OF THE RETURNS WILL BE THROUGH BEING ABLE TO HELP PEOPLE WITHIN SOCIETY AS WELL AS ALLOWING PEOPLE TO MAINTAIN A BETTER QUALITY OF LIFE. THIS WILL BE BEST SHOWN THROUGH THE POST OCCUPANCY ASPECTS OF THE PROJECT WHICH WILL SHOW HOW THE RESIDENTS OF THIS FACILITY HAVE HAD THEIR LIVES IMPROVED THROUGH INCREASES FREEDOMS AND ALLOWING THEM TO LIVE AS CLOSES TO NORMAL LIFE AS THEY CAN THROUGH THE COURSE OF THERE DISEASE.

AS FOR WHY I AM PERSONALLY INFESTED IN THIS PROJECT, IT IS MAINLY DO TO MY GRANDPARENTS. MY GRANDMOTHER HAS BEEN IN SEVERAL LONG-TERM CARE FACILITIES AND MANY OF THEM FELT VERY DEPRESSING AND NOT TRYING TO IMPROVE THE RESIDENT'S LIVES. I WANT TO CREATE A FACILITY THAT WILL IMPROVE RESIDENTS LIVES AND BECOME A PLACES THAT WILL BE SOMEWHERE WHERE MY GRANDMOTHER OR GRANDFATHER WOULD WANT TO STAY AS WELL AS BE A PLACES THAT WOULD BE ABLE TO HELP THEM WHILE GIVING THEM A SENSES OF NORMALCY AND ALLOWING THEM TO CONTINUE TO REMAIN INDEPENDENT FOR AS LONG AS POSSIBLE.

THIS PROJECT WILL BE ABLE TO PROVIDE AN EXCELLENT CHALLENGE THAT WILL TEST ALL ASPECTS OF WHAT I HAVE LEARNED AT NORTH DAKOTA STATE UNIVERSITY FOR SEVERAL REASONS. THE FIRST BEING THAT THE PROJECT WILL FORCE MYSELF TO UTILIZE MY UNDERSTANDING OF LAYOUTS AND SPACES AND HOW THOSE EFFECT PEOPLE AND THEIR ABILITY TO FIND THERE WAY AROUND THE STRUCTURE. IT WILL ALSO FORCE MYSELF TO UTILIZE MY UNDERSTANDING OF LIGHTING, MATERIAL, AND TEXTURES TO CREATE A COMFORTABLE AND EASILY UNDERSTANDABLE AND NAVIGABLE SPACE FOR THE RESIDENTS. THIS PROJECT WILL ALSO PROVIDE CHALLENGES AND OPPORTUNITIES FOR GREEN AND SUSTAINABLE PRACTICES WHILE PROVIDING CHALLENGES WITH MECHANICAL SYSTEMS THAT WILL BE NEED FOR A FACILITY OF THIS SIZE. FINALLY, THIS PROJECT WILL ALSO TEST MY ABILITY TO TURN CODE REQUIREMENTS INTO DESIGN OPPORTUNITIES. AS FOR WHY THIS IS IMPORTANT IS BECAUSE THIS PROJECT AS SHOWN ABOVE WILL FINALLY BRING ALL KNOWLEDGE THAT I HAVE ACQUIRED THROUGH OUT MY SCHOOLING INTO ONE SPOT AS WELL AS BEING ABLE TO HONE AND DEVELOP NEW SKILLS SUCH AS CONDUCTING INTERVIEWS AND WORKING WITH ACTUAL PEOPLE THAT WOULD UTILIZES SUCH A STRUCTURE. FINALLY, THIS PROJECT WILL START TO SHOW ME HOW PROJECTS AND DESIGN FUNCTION OUTSIDE OF AN ACADEMIC ENVIRONMENT.

OVERALL, I FEEL THAT THIS PROJECT WILL ADVANCE WHAT WE UNDERSTAND ABOUT DESIGN AND HOW IT CAN HELP THOSE WITH DEMENTIA AND OTHER MENTAL BASED DISEASES. IT WILL DO THIS BY DESIGNING WITH THE INPUT OF SUCH PEOPLE AS WELL AS COMBINING INFORMATION FROM OTHER SOURCES THAT WILL DELVE INTO THIS TOPIC TO CREATE A FACILITY THAT WILL SHOW US HOW SUCH A STRUCTURE MAY WORK AND WHAT MAY NEED TO BE IMPROVED ON. AS FOR THE IMPORTANCE OF SUCH A PROJECT I FEEL THAT IT IS VERY IMPERATIVE THAT THIS WORK AND PROJECT SHOULD BE DONE, AND EVEN THOU I AM QUIET ATTACH TO THIS PROJECT AND WANT TO BE THE ONE TO SOLVE THIS PROBLEM I FEEL THAT THIS PROBLEM WOULD BE BEST SOLVED THROUGH A GROUP EFFORT OF OTHER PROFESSIONALS.

To begin It would be best to go over a breath history of NURSING HOMES AND LONG-TERM CARE FACILITIES AND HOW THEY CAME ABOUT. THIS DOCUMENT WILL THEN GO THROUGH HOW THIS PROJECT THAT I AM CURRENTLY CREATING, COMPARES TO HISTORICAL ASPECTS OF LONG-TERM CARE FACILITIES. THIS WILL BE DONE BY COMPARING SIMILARITIES AS WELL AS DIFFERENCES. THIS WILL BE FOLLOWED BY COMPARING THIS TO CURRENT TRENDS AS WELL AS OTHER DEVELOPMENTS THAT ARE CURRENTLY TAKING PLACES WITHIN OUR SOCIETY. FOR THE FINAL PORTION OF THIS SECTION, IT WILL BE GOING OVER THE HISTORY OF GRAND FORKS WHERE THE FACILITY THAT IS BEING DESIGNED FOR THIS PROJECT WILL BE LOCATED. AS WELL AS IT WILL BE GOING OVER THE DEMOGRAPHICS OF GRAND FORKS TOUCHING MAINLY ON AGE AND RACE WITHIN THE CITY. IT WILL THEN BE WRAPPING UP THIS SECTION BY ANALYZING THE MATERIAL SHOWN ABOVE AND PROVIDING A BRIEF SUMMARY.

SO, LETS BEGIN WITH A BRIEF HISTORY OF THE LONG-TERM CARE FACILITY OR NURSING HOME. THE FIRST IDEAS FOR WHAT WOULD EVENTUALLY BECOME SUCH FACILITIES CAME TO THE UNITED STATES FROM ENGLAND IN THE FORM OF THE ALMSHOUSE, THESE FACILITIES WHERE PUBLICLY FUNDED AND WHERE SET UP AS PLACE TO CARE FOR THE SICK WHO WOULD NOT BE ADMITTED INTO THE GENERAL HOSPITAL AS THOSE SENT TO ALMSHOUSES WERE THOSE SUFFERING FROM WHAT WAS CONSIDERED UNCURABLE DISEASES SUCH AS CANCER. THESE PLACES ALSO CARED FOR THE POOR THOSE HOW COULD NOT WORK SUCH AS THE ELDERLY IF THEY HAD NO ONE ELSE TO CARE FOR THEM AS WELL AS THOSE SUFFERING FROM MENTAL DISEASES. THESE FACILITIES WHERE NOT WELL RUN OR KEPT WITH CARE BEING PROVIDED BY OTHER RESIDENTS AS WELL AS PRISONERS SERVING SENTENCES FOR MINOR CRIMES. THIS SLOWLY CHANGE THROUGH THE 1800S TO THE EARLY 1900s as more of the population was living longer do to the EFFECTS OF THE INDUSTRIAL REVOLUTION THERE WAS A NEEDED FOR FACILITIES TO CARE FOR THE ELDERLY POPULATION THAT DID NOT HAVE FAMILY MEMBERS TO CARE FOR THEM, THIS LEAD RISE TO OF OTHER ORGANIZATIONS IN THE FORM OF PRIVATE FACILLITIES OR RELIGIOUS GROUPS CREATING PLACES TO CARE FOR SUCH INDIVIDUALS IN A MORE HOME LIKE STYLE BUT THESE FACILITIES WHERE NORMALLY ALL FOUNDED THROUGH CHARITY OR OTHER PUBLIC MEANS.

THOUGH MANY OF THESE FACILITIES STILL CARRIED A STIGMA TO THEM FROM THE OLDER ALMSHOUSES AND WHERE OFTEN VIEWED AS A LAST RESORT FOR MANY PEOPLE. THIS CHANGED WITHIN THE 1930S WHEN GOVERNMENT POLICY SUCH AS THE UNITED STATES SOCIAL SECURITY ACT OF 1935 MADE IT IMPOSSIBLE FOR THOSE WITHIN PUBLIC INSTITUTIONS TO GAIN SUBSITES FROM THE GOVERNMENT THIS LED TO THESE PUBLIC FACILITIES DYING OUT AND MANY RESIDENTS MOVING TO PRIVATE FACILITIES IN THE FORM OF REST HOMES. THE NEXT MAJOR CHANGE WOULD ONLY COME 20 YEARS LATER IN THE 1950S WITH MORE REGULATIONS TO HELP STOP ABUSE AND NEGLECT FROM TAKING PLACES WITHIN THESE REST HOMES AS WELL AS LEADING TO THE CREATION OF NURSING HOMES AND LONG-TERM CARE FACILITIES THAT WE WOULD KNOW OF TODAY WHICH ARE MEDICAL IN NATURE.



FIG:45 ALMSHOUSE LOCATED IN NEW YORK

AS FOR HOW THIS LONG-TERM CARE FACILITY THAT IS BEING CREATED FOR THIS PROJECT COMPARES TO THE HISTORICAL ASPECTS OF NURSING HOMES OR OTHER SUCH FACILITIES DESIGNED TO CARE FOR THE ELDERLY. IT CAN BE BEST SHOWN THROUGH THE SIMILARITIES THAT IT HAS WITH THESE FACILITIES AND HOW IT WILL UTILIZE THEM AS WELL AS THE DIFFERENCES THAT CAN BE SHOWN THROUGH OUT THESE FACILITIES WHEN COMPARED TO WHAT WILL BE DONE FOR THIS ONE, I WILL FIRST START ON WHAT THE SIMILARITIES ARE FOR THIS PROJECT AND THOSE THROUGH OUT HISTORY. TO START THE LARGEST SIMILARITY WOULD BE ITS OVERALL FUNCTION WHICH WOULD BE TO CARE FOR AND SUPPORT THE ELDERLY WITHIN SOCIETY AS MANY MAY NOT BE ABLE TO DO SO THEMSELF. THE WAY THAT THIS FACILITY WILL GO ABOUT WOULD BE FAIRLY SIMILAR TO THE OLDER FACILITIES THAT WHERE RUN BY RELIGIOUS ORGANIZATIONS OR FAMILIES THAT NEEDED TO CARE FOR ELDERLY FAMILY MEMBERS AND THAT WOULD BE THROUGH THE USE OF SMALLER GROUPS AS MANY OF THESE FACILITIES HOUSED A SMALLER NUMBER OF RESIDENTS NORMALLY AROUND THE 305 UNLESS THEY WHERE LOCATED WITHIN MAJOR CITIES. THE OTHER MAJOR SIMILARITY THAT THIS FACILITY WILL HAVE SIMILAR STYLE OF CARE, COMPARED TO OLDER FACILITIES WHICH IS THAT OF A MORE HOME LIKE FEEL AS MANY OF THESE OLDER FACILITIES FROM THE 1800S WHERE MORE OF A SHARED HOSING THEN A TRUE CARE FACILITY. AS FOR HOW THIS FACILITY WILL BE SIMILAR TO THOSE THAT CAME AFTER THE SOCIAL SECURITY ACT OF 1935.

IT WILL MAINLY BE FROM HAVING TO ADHERE TO MANY OF THE SAME REQUIREMENTS THAT THOSE FROM THE 1930S ONWARDS HAD TO ADHERE TO INSURE PROPER CARE FOR THE RESIDENTS. IT WILL ALSO BE SIMILAR IN THE FACT THAT IT WILL UTILIZES THE INCREASE AMOUNT OF MEDICAL EQUIPMENT AND STANDARDS THAT IS LOCATED WITH MANY FACILITIES STARTING AROUND THE 1950S. AS FOR THE MAJOR DIFFERENCES THAT WILL BE FOUND WITHIN THIS FACILITY COMPARED TO HISTORICAL EXAMPLES IT WILL BE MAINLY DUE TO THE LEVEL OF CARE WHICH HAS INCREASED GREATLY DUE TO MEDICAL ADVANCEMENTS AND REGULATIONS AS WELL AS THAT THIS FACILITY WILL TRY TO REMOVE THE HOSPITAL FEELING THAT MANY HISTORICAL FACILITIES HAD AS WELL AS IT WILL UTILIZES DESIGN AND ARCHITECTURE TO HELP SUPPORT RESIDENTS. TO HELP CREATE A BETTER STANDARD OF LIVING COMPARED TO OLDER CARE FACILITIES THAT MAINLY RELIED ON MEDICAL ADVANCEMENTS TO BETTER RESIDENTS LIVES.

AS FOR HOW THIS FACILITY WILL INTERACT WITH AND UTILIZES CHANGES THAT ARE TAKING PLACE THROUGHOUT OUR SOCIETY IN THE FORM OF TRENDS THAT HAVE EMERGED WITHIN NURSING HOMES AND LONG-TERM CARE FACILITIES AS WELL AS THROUGH OUT THE MEDICAL PROFESSION. THE MAJOR TRENDS THAT HAVE BEEN FOUND TO BE AFFECTING LONG TERM CARE FACILITIES IS THAT THERE IS A GREATER PUSH FOR THESE FACILITIES TO BE BETTER CONNECTED WITHIN THE COMMUNITY WHICH WAS A MAJOR ASPECT IN MANY OLDER CARE FACILITIES BEFORE THE 1930S BUT WAS SEEMED TO BE PHASED OUT THROUGH OUT THE 40s THROUGH THE 80s BEFORE SLOWLY MAKING ITS WAY BACK AS A MAJOR ASPECT FOR THESE FACILITIES. ANOTHER MAJOR TREND THAT IS APPEARING IS A MOVE FOR MORE HOME LIKE EXPERIENCES WITHIN THESE FACILITIES AS WELL AS MORE TECHNOLOGY TO HELP SUPPORT RESIDENTS AND TO CREATE A BETTER STANDARD OF LIVING, AS FOR THE LAST MAJOR TREND THAT HAS BEEN NOTICE IS FOR RESIDENTS TO HAVE MORE CHOICES AND MORE INDEPENDENCE AS A WHOLE.

FOR HOW THIS PROJECT IT WILL ADDRESS THESE SOCIAL AND CULTURAL TRENDS THAT HAVE FORMED. IT WILL MAINLY DO THIS THROUGH DESIGN AND LAYOUT BY CREATING A FACILITY THAT WILL UTILIZES ITS LAYOUT AND OVERALL DESIGN TO BETTER ALLOW RESIDENTS TO NAVIGATE AND FIND THERE WAY THROUGHOUT THE FACILITIES WHILE UTILIZING SMALLER GROUPINGS OF RESIDENTS PER SECTIONS TO CREATE A MORE HOME LIKE EXPERIENCES THROUGH THE USES OF SMALLER GROUPS AND DESIGN TO CREATE SPACES THAT HAVE A MORE HOME LIKE SIZE AND FEEL WHILE STILL BEING FUNCTIONAL AS A SPACE TO HELP RESIDENTS NAVIGATED THE FACILITY AND DO DAY TO DAY TASKS WHICH WOULD GREATLY INCREASES RESIDENTS STANDERS OF LIVING. FINALLY, AS FOR THE COMMUNITY CONNECTION ASPECT OF THE FACILITY IT WILL TRY TO ACCOMMODATE THIS TREND AS WELL BY BEING CONNECT TO A LOCAL NEIGHBORHOOD THROUGH THE USES OF WALKING PATHS AND VIEWS WHILE ALSO BEING CLOSES TO MAJOR SHOPPING AND ENTERTAINMENT AREAS THAT THEY WOULD BE ABLE TO ATTEND WITH FAMILY OR FRIENDS. WHICH TROUGH THESE DIFFERENT APPROACHES THE FACILITIES HOPES TO BETTER THE LIVES OF ITS RESIDENTS.

FOR THIS FINAL SECTION THE PAPER WILL BE GOING OVER THE HISTORY OF GRAND FORKS WHERE THE FACILITY IS LOCATED ON THE NORTH DAKOTA SIDE OF THE RIVER. AS WELL IT WILL BE GOING THROUGH THE CULTURAL AND SOCIAL ASPECTS OF THE CITY BY GOING OVER THE DEMOGRAPHICS FOR AGE, SEX, AND RACE WITHIN THE CITY AS WELL AS CULTURAL ASPECTS OF THE CITY AND SURROUNDING AREA. So, LETS BEGIN WITH A BRIEF HISTORY OF THE CITY OF GRAND FORKS. THE AREA WHICH WAS TO BECOME GRAND FORKS FIRST STARTED AS A FUR TRADES CAMP CALLED LES GRANDES FOURCHES WITH PERMANENT SETTLEMENT STARTING AROUND 1870. THE CITY CONTINUED TO FLOURISH THROUGH TRADE AS THE RAILROAD CAME THROUGH THE CITY IN 1880. THROUGHOUT THIS TIME GRAND FORKS COUNTIES TO BE A TRADE HUB TELL PRESENT WITH A LARGE AMOUNT OF FARM GOODS IN THE FORM OF CROPS BEING SENT THROUGH THE CITY DAILY. THE CITY ALSO BECAME A HUB FOR EDUCATION WHEN THE UNIVERSITY OF NORTH DAKOTA WAS SET UP THERE IN 1883.



FIG:46 DOWNTOWN GRAND FORKS

THIS LED TO GRAND FORKS BECOMING A HUB FOR EDUCATION IN HEALTHCARE AEROSPACE AND SEVERAL OTHER FIELDS. ALONG WITH THIS THE CITY ALSO BECAME A CRUCIAL PART OF THE UNITED STATES NUCLEAR DEFENSES IN 1954 WHEN THE GRAND FORKS AIR FORCES BASE WAS CREATED, THIS BASE ACTED AS AN INTERCEPTOR BASE AS WELL AS HOUSING A BOMBER WING. GRAND FORKS CONTINUED TO GROW THROUGHOUT THE 1960S TO THE PRESENT WITH A MAJOR DISASTER STRIKING IN 1997 WHEN THE RED RIVER HIT HISTORIC FLOOD HIGHS LEADING TO MOST OF THE CITY BEING EVACUATED. DURING THE FLOOD FIRE STRUCTURE AND DEVASTATED THE DOWNTOWN DISTRICT OF GRAND FORKS THOU THE CITY HAS RECOVERED AND CONTINUES TO FLOURISH TO THIS DAY.

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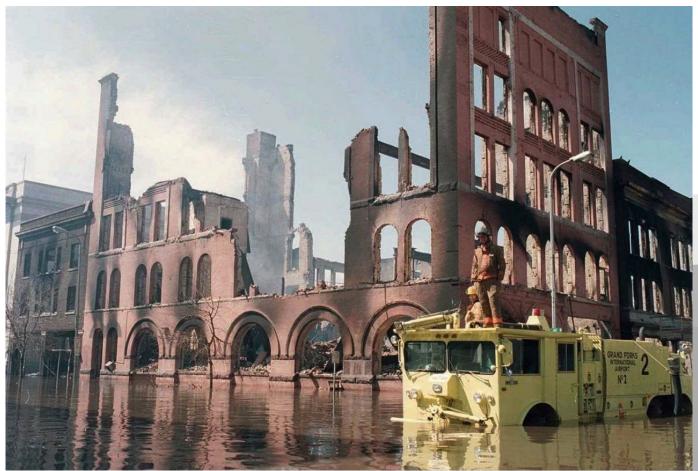
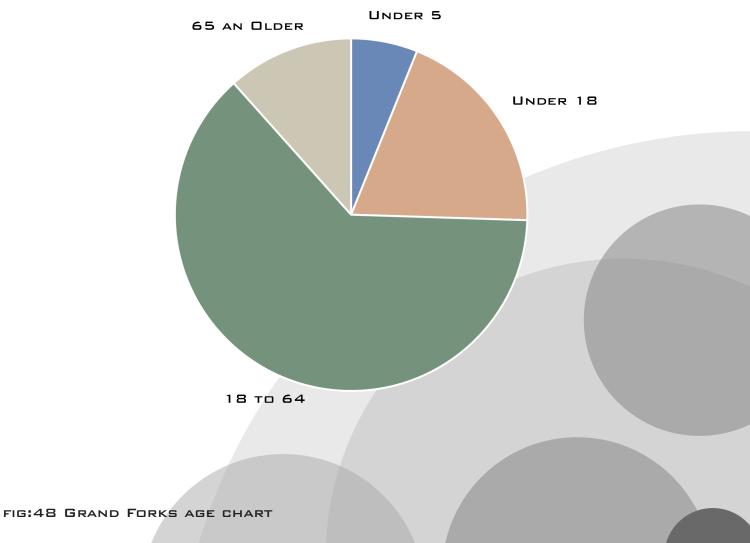
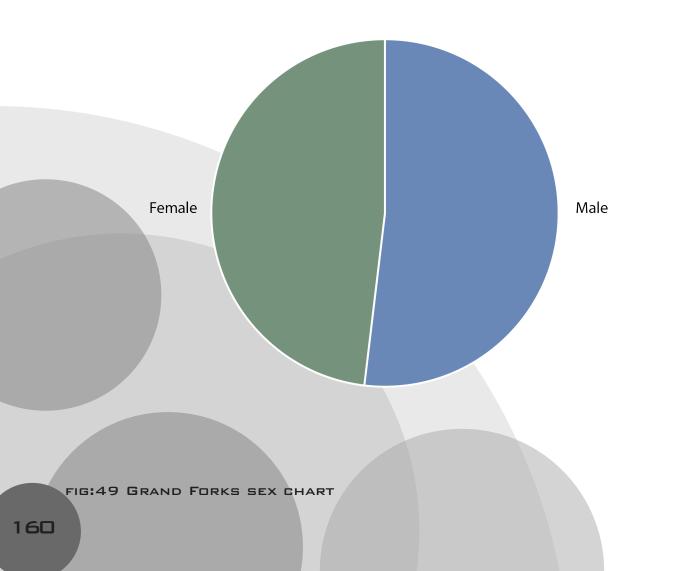
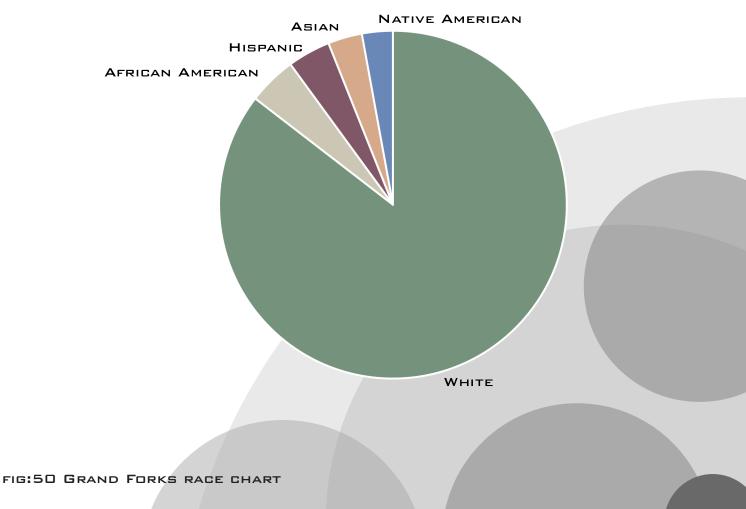


FIG:47 GRAND FORKS FLOOD OF 1997

As for the cultural aspects of the city of Grand Forks would be considered a standard mid-western town. The city has a large amount of German and Norwegian influences as these where the two main groups that settled the area. Thou this may change over time as the city continues to grow. As for the city itself it has a population of 55,839 as of July 1, 2019. This population can be broken down in several ways which are shown on the next several pages. Thou the major apsects of the city such as age can be broken down with the largest group being ages between 18 and 64 with the secound major age group being under 18. The city is roughly even regarding sex. For race the city is mainly white with african american, hispanics, asians, and native americans making up less then a Quarter of the poulation of Grand Forks combined.



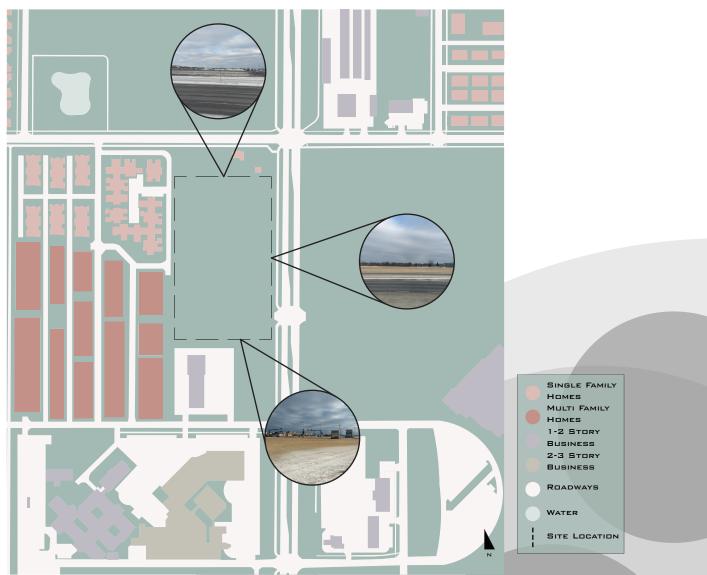




THIS DATA HELPS SHOW MANY OF THE DIFFERENT SOCIAL AND CULTURAL ASPECTS OF THE CITY AND HOW THEY MAY AFFECT THE DESIGN PROCESS FOR THE PROJECT THAT IS CREATED THROUGH THIS WORK. IT SHOWS HOW A FACILITY LIKE THIS ONE IS GREATLY NEEDED DO TO A LARGE PORTION OF THE 65 AND OLDER COMMUNITY IS CONSIDERED HAVING A DISABILITY AT 7.9% OF THE COMMUNITY. MEANING THAT OVER HAFT OF THE 65 AN OLDER COMMUNITY WILL NEED ASSISTANCE IN ONE WAY OR ANOTHER. THE DATA ALSO INFLUENCES THE DESIGN DO TO HOW IT SHOWS THAT GREAT CARE WILL NEED TO BE TAKEN TO MAKE SURE SPACE WITHIN THE FACILITY SUCH AS THE CHAPE CAN BE USED BY EVERYONE AS DEMOGRAPHIC CHANGES WITHIN THE CITY ARE SLOWLY CHANGING. THOU THESE ARE JUST THE TWO MAIN AREAS THAT ARE AFFECTED THROUGH THE DATA, BUT IT ALSO LEAVES MUCH MORE TO CONSIDER WITHIN THE DESIGN.

VIEWS: OVERALL THERE ARE VIEWS OF RESIDENTIAL AND BUSINESS ALONG WITH LARGE OPEN FIELDS WITHIN THE CITY TO THE EAST AND NORTH WHILE ALSO HAVING A SMALL PARK TO THE NORTH. TO THE SOUTH THERE ARE BUSINESS LOCATED RIGHT NEXT TO THE SITE WITH APARTMENTS AND HOMES LOCATED NEXT TO THE SITE ALONG THE WEST SIDE AS WELL. AS FOR WHAT DESIGN FEATURES THIS PRESENTS. IT WOULD SEEM THE BEST VIEWS WOULD BE TO THE NORTH AND EAST AS THERE IS A LARGE AMOUNT OF ACTIVITY TAKING PLACES WITHIN THESE AREAS AND ALLOWS FOR RESIDENCES TO TAKE IN A LARGE PORTION OF THE CITY. IT MAY BE GOOD TO CREATE SMALL SCENES IN THESE DIRECTIONS TO ALLOW RESIDENCES TO BETTER STAY CONNECTED TO THE CITY AND COMMUNITY AS A HOLE. IT MAY ALSO BE GOOD TO ALLOW VIEWS TO THE WEST TO HELP CONNECT THE RESIDENCES TO THE COMMUNITY AS WELL.





TEXTURES: MANY OF THE SURROUNDING TEXTURES ARE COURSES AND ROUGH IN NATURE WITH SEVERAL SMOOTH TEXTURES OF THE BUILT ENVIRONMENT MIXED IN. IT MAY BE GOOD TO EMPHASES THE MORE COURSES AND NATURAL TEXTURES AS MORE OF THE BUILT ENVIRONMENT CONTINUES TO GET CLOSER TO THE SITE.

MATERIALS: MANY OF THE MATERIALS THAT ARE USED AROUND THE SITE SEEM TO BE CONCRETE, BRICK, WOOD, PLASTIC/ALUMINUM SIDING, AND METAL. ALONG WITH A LARGE AMOUNT OF GLASS. OVERALL, IT WOULD SEEM THAT THESE MATERIALS SHOULD BE LOCATED IN THE PROJECT ESPECIALLY THOSE USED WITHIN THE RESIDENTIAL NEIGHBORHOODS TO BETTER TIE THE FACILITY TO THAT OF A RESIDENTIAL NEIGHBORHOOD.

SHADE AND SHADOW: OVERALL THERE IS NOT A LOT OF SHADE OR SHADOWS ON THE SITE WITH MOST BEING LOCATED BY THE GROUPS OF TREES ON THE SITE AS WELL AS SOME BEING CASTED ONTO THE SITE TOWARDS THE END OF THE DAY FROM THE WEST SIDE OF THE SITE. THIS WILL PROBABLY NEED TO BE ADDRESS DUE TO HOW THE WEST SIDE OF THE SITE WILL NEED MORE LIGHTING DUE TO THE SHADOWS BEING CASTED DURING THE END OF THE DAY.

BUILT ENVIRONMENT: OVERALL, MOST OF THE BUILT ENVIRONMENT IS TO THE WEST AND SOUTH OF THE SITE BUT THERE IS CONSTRUCTION TAKING PLACE TO THE NORTH AND SOME TO THE EAST WHICH WILL NEED TO BE TAKEN INTO ACCOUNT WHEN DESIGNING VISTAS AND LIGHTING FOR THE SITE. MOST OF THE BUILDINGS SURROUNDING THE SITE IS 1-3 STORIES IN HIGH. WITH THIS IN MINE THE FACILITY SHOULD NOT EXCEED 2 STORIES AS TO FIT INTO THE NEIGHBORHOOD.

LIGHT: OVERALL, LIGHT IS VERY GOOD ON THE SITE ESPECIALLY IN THE MORNING AND AFTERNOON THOUGHT IT DOES DROP OFF SOME TOWARDS EVENING DO TO STRUCTURES TO THE WEST AND SOUTH BLOCKING SOME OF THE LIGHT. OVERALL I BELIEVE THAT THE STRUCTURE MAY NEED TO BE CLOSER TO THE EAST AS TO ALLOW SOME LIGHT INTO THE WEST SIDE OF THE SITE AS IF IT WAS LOCATED TOWARDS THE WEST SIDE IT MAY BLOCK LIGHT FROM REACHING HOMES CLOSE TO THE SITE ON THAT SIDE.

VEGETATION: PLANT LIFE ON THE SITE IS MAINLY GRASS AND SOME GROUPS OF TREES THIS IS THE SAME FOR THE SURROUNDING STRUCTURES. MANY OF THE TREES WILL HAVE TO COME OUT DURING CONSTRUCTION. BUT IT WOULD BE BENEFICIAL FOR SOME TREES TO BE BROUGHT BACK INTO THE SITE SUCH AS PINES AND POSSIBLE WILLOWS OR OTHER LEAF BARING TREES THAT ARE NATIVE TO THE AREA. IT WOULD ALSO BE BENEFICIAL FOR SOME NATIVE GRASSES TO BE BROUGHT INTO THE PROJECT AND SITE.

PLANT COVER: OVERALL, PLANT COVER IS VERY LIGHT WITH JUST GRASS AND A FEW TREES ON THE SITE MOST LOCATED ON THE SOUTH SIDE OF THE SITE.

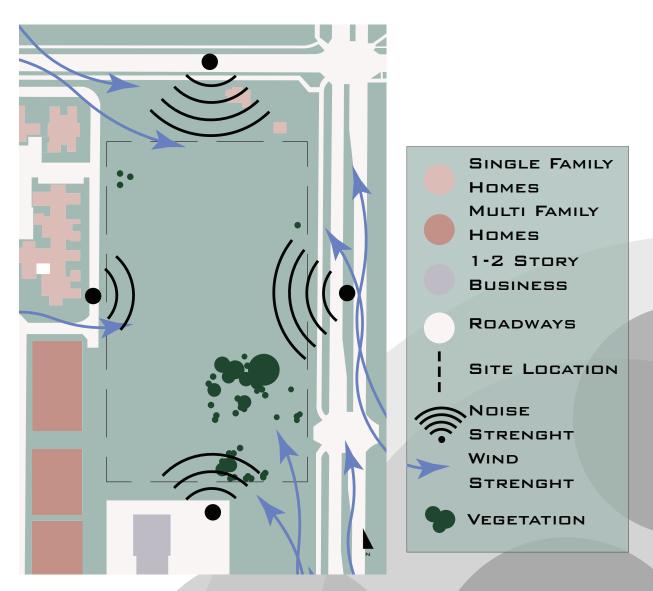
WATER: AS FOR WATER THERE IS NONE LOCATED ON THE SITE BUT THERE IS A POND NEAR BY TOWARDS THE NORTH. AS FOR WATER ON THE SITE A SMALL POUND MAY BE BENEFICIAL BUT IT MAYBE BECOME A CONCERN WITH IT BECOMING A SAFETY HAZARD FOR THE RESIDENTS. THOU IT SHOULD BE LOOKED INTO MORE.

WATER TABLE: AS FOR THE WATER TABLE IT IS LOCATED BETWEEN 21.5-21.6 FT BELOW THE SURFACE ALONG WITH MOISTER CONTENT AT 24-23% AT 5-100cm with this dropping 1-2% heading towards THE SURFACE.

WIND: WIND ON THE SITE SEEMS TO MAINLY COME FROM THE NORTH AND EAST SIDE DUE TO THE ROADWAY AND A LARGE FIELD CHANNELING IT TOWARDS THE SITE. THE SOUTH AND WEST SIDE HAS VERY LITTLE IN THE WAY OF WIND DUE TO THE STRUCTURES BLOCKING IT. OVERALL, THERE MAY NEED TO BE A WIND BREAK MADE OUT OF VEGETATION ALONG THE EAST SIDE AND POSSIBLY THE NORTH SIDE TO CUT DONE ON THE WIND COMING INTO THE SITE.

NOISE: OVERALL MOST OF THE NOISE ON THE SITE COMES FROM THE NORTH AND EAST DUE TO THE BUSY STREETS LOCATED ON THAT SIDE OF THE SITE. THE BEST COURSE OF ACTION TO DEAL WITH THIS IS TO CREATE A BARRIER MADE UP OF TREES AND OTHER FOLIAGE TO HELP BLOCK THIS NOISE FROM ENTERING THE SITE.

FIG:52 SITE MAP OF WIND, NOISE, AND MAJOR VEGTAION



DISTRESS: OVERALL, THERE SEEMED TO BE VERY LITTLE IN THE FORM OF DISTRESS ON THE SITE. WHAT LITTLE THERE WAS, WAS IN THE FORM OF A FEW DEAD AND DYING TREES WHICH WILL NEED TO BE REMOVED ANYWAYS AS WELL AS SOME EROSION ON THE DITCH ON THE EAST SIDE WHICH WILL NEED TO BE FIXED TO PREVENT ANY FUTURE PROBLEMS.

HUMIDITY: HUMIDITY VARIES FROM 70.99% IN DEC TO 54.8% IN MAY MEANING THAT COOLING AND DEHUMIDIFYING WILL BE A CONCERN FOR THE **HVAC** SYSTEM FOR THE FACILITY

SOIL: THE SOIL CONSISTS OF A SLOPE OF 0-2% AND IS MAINLY MADE UP OF WET MOLLISOLS FROM THE ORDER MOLLISOLS AND THE SUBORDER AGOOLLS. THE GROUND IS ALSO VERY FERTILE AND MAINLY MADE UP OF SANDY LOAM, SAND AND GRAVEL MIX, AND FINALLY POCKETS OF GRAVEL.

SLOPE: OVERALL, THE SITE IS VERY FLAT WITH THE AVERAGE SLOPE WITHIN THE AREA BEING O-2% MEANING DRAINAGE WILL BE A PROBLEM ON THE SITE WHICH WILL NEED TO BE TAKEN INTO ACCOUNT.

UTILITIES: OVERALL, IT SEEMS THAT THERE ARE HOCK UPS ON THE SITE FOR WATER AND SEWER ALONG WITH 3 FIRE HYDRANTS ALONG THE EAST SIDE WHICH WILL NEED TO BE TAKEN INTO ACCOUNT FOR THE DESIGN. WE WERE UNABLE TO LOCATE THE POWER LINE LOCATIONS OR BOXES ON THE SITE.

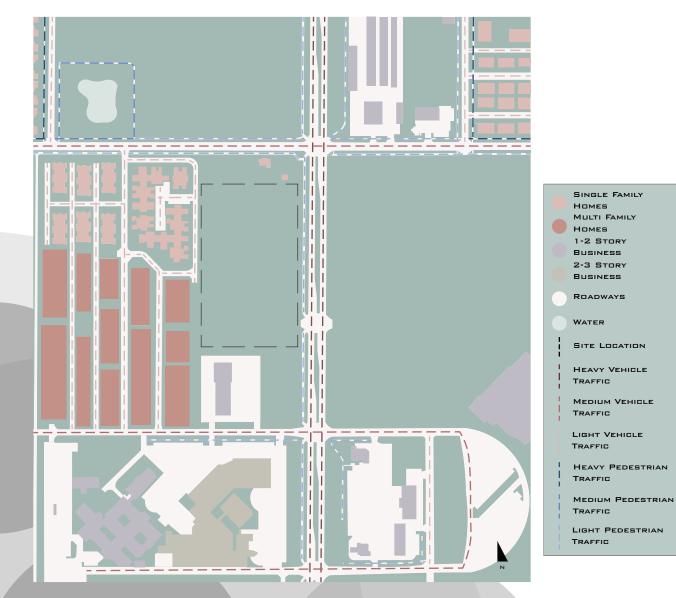
HUMAN CHARACTERISTICS: OVERALL, THERE DID NOT SEEM TO BE THAT MUCH HUMAN INVOLVEMENT ON THE SITE BEFORE CONSTRUCTION TOKE PLACE. WITH THERE BEING A DITCH ALONG THE EAST SIDE AND A SMALLER DITCH RUNG THROUGH THE CENTER OF THE SITE WHICH MAY MEAN THERE IS A DRAINAGE PROBLEM ON THE SITE. BUT OTHER THAN THAT, THE ONLY OTHER HUMAN INVOLVEMENT WAS THAT OF THE GRASS BEING MOWED.

SITE CHARACTERISTICS: OVERALL THE SITE HAS A FEELING OF BEING UNDER DEVELOP OR EVEN AS A FIELD THAT JUST GOT INGULFED BY THE CITY. IT MAY BE GOOD TO KEEP THE FARMLAND FEEL TO THE SITE THOUGH WE ARE NOT SURE HOW TO GO ABOUT THAT.

VISUAL FORM: THE VISUAL FORM OF THE SITE IS VERY FLAT WITH IT BEING SURROUNDED WITH 1-3 STORY BUILDINGS. THOUGH WITH A DITCH RUNG THROUGH THE MIDDLE THE SITE IS DIVIDED IN HAFT WITH THE SOUTH HAFT FEELING MORE FILLED OUT DO TO MOST OF THE TREES BEING LOCATED ON IT.

TRAFFIC VEHICLE/PEDESTRIAN: OVERALL, PEDESTRIAN TRAFFIC ON AND NEAR THE SITE IS VERY LIGHT TO NONE EXISTENCES, THIS MAY BE FIXED WITH THE CREATION OF AREAS WHERE RESIDENTS AND THOSE FROM THE NEAR BY NEIGHBORHOODS COULD COME TO AND REST AND RELAXED. AS FOR VEHICLE TRAFFIC WITHIN THE RESIDENTIAL AREAS IT IS FAIRLY LIGHT THOUGHT THE STREETS ON THE EAST AND NORTH SITE HAVE VERY HEAVY TRAFFIC ON THEM FOR MOST OF THE DAY. THIS WILL MEAN THERE WILL NEED TO BE A WAY TO BLOCK NOISE FROM THESE TWO STREETS.

FIG:53 SITE MAP OF TRAFFIC ON AND NEAR THE SITE



#### FIG:54 WIND ROSE FOR SUMMER

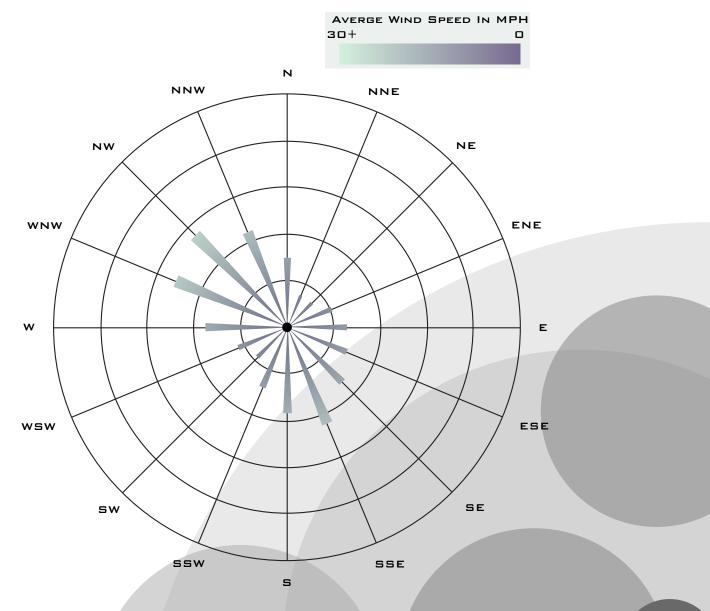
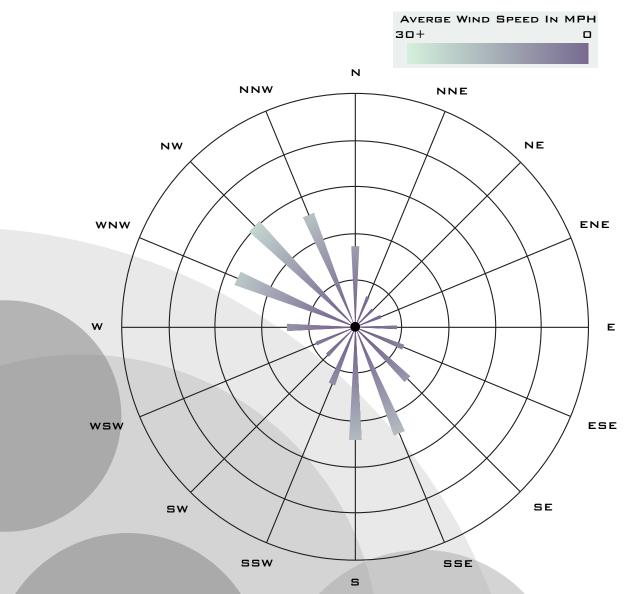
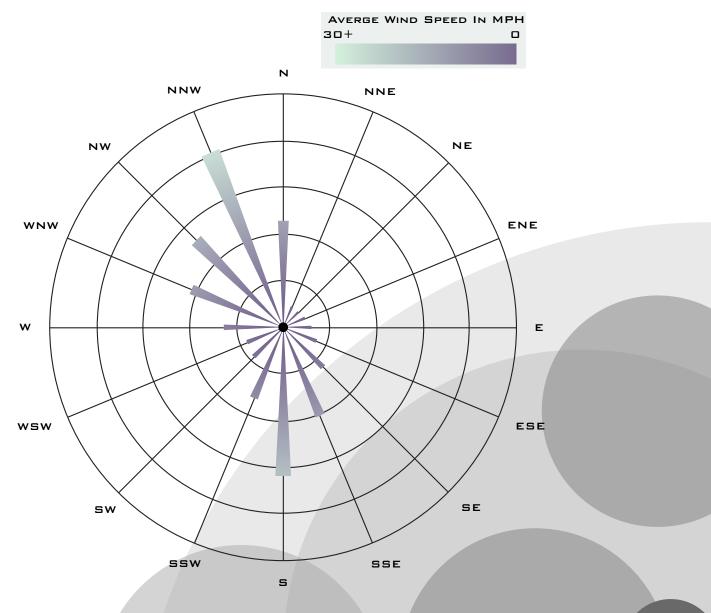


FIG:55 WIND ROSE FOR FALL

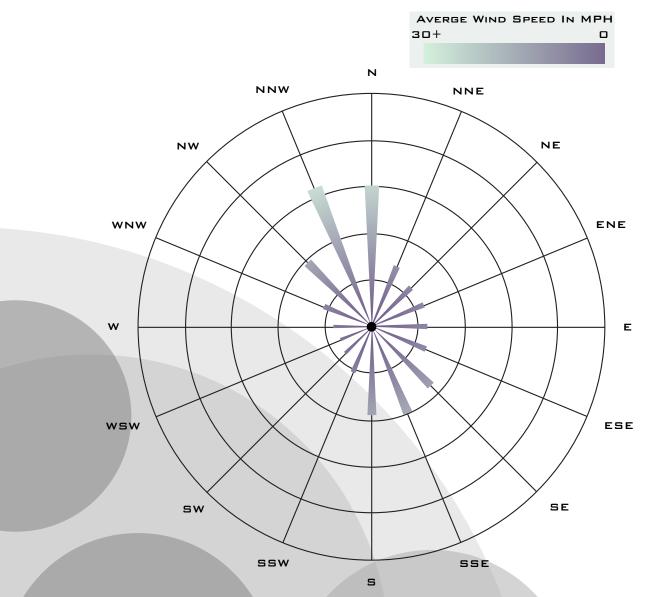


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#### FIG:56 WIND ROSE FOR WINTER



#### FIG:57 WIND ROSE FOR SPRING



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### PERFORMANCE CRITERIA

As for the performance criteria for this structure. We will be measuring mainly lighting, energy use, along with temperature, and noise levels as well as paths taken. This information will mainly be gained through the uses of charts as well as formula to figure out targets to achieve the desired effect. As for analyzing this information this will mainly be done through drawings along with computer simulations and possibly scale models. With each of these methods to be used to measure each of these different aspects. Finally, for how we will judge if this project has met the performances criteria. It will mainly be done through seeing that we have met or exceeded the set goals for these criteria along with bringing in others such as professors or peers to get feedback that these criteria where met.

#### PERFORMANCE CRITERIA

SPACE ALLOCATION: DO TO THE NATURE OF THIS STRUCTURE THE SIZES OF DIFFERENT SPACES THROUGHOUT THE FACILITY WILL VARY DEPENDING ON THEIR LOCATION WITHIN THE STRUCTURE MAKING IT THAT THERE MAY BE A ROOM WITH THE SAME FUNCTION BUT DIFFERENT SIZE THROUGHOUT THE FACILITY. BUT IN GENERAL, THE SPACES WITHIN THE STRUCTURE WILL BE THE APARTMENTS WHICH WILL BE AROUND 500 SQUARE FEET EACH. THIS WILL BE FOLLOWED BY KITCHENS, DINNING, ACTIVITY/SOCIAL ROOMS, AND NURSES' STATIONS WITH STORAGE AREAS ALONG WITH RESTROOMS WHICH WILL ALL VERY IN SIZE GENERALLY FROM LOCATION TO LOCATION. AS FOR OTHER ROOMS AND SPACE WITHIN THE STRUCTURE MOST HAVE NOT BEEN DETERMINED YET THOU SEVERAL SPACES SUCH AS THE OFFICES AND CONFERENCE ROOM HAVE BEEN DETERMINED WITH THE OFFICES BEING AROUND 100 SQUARE FEET IN AREA AND THE CONFERENCES ROOM BEING ABOUT 200 TO 220 SQUARE FEET IN SIZES.

## PERFORMANCE CRITERIA

SPACE SIZES IN SQ FEET			
	Low	Нібн	SPACES
LOBBY	200	300	1
RECEPTION	300	500	1
RESTROOMS	500	700	2
KITCHENS	150-1000	200-1000	7
DINING ROOM	250-500	300-600	7
LAUNDRY	1500	3000	1
MECHANICAL ROOM	1000	1500	1
APARTMENTS	350	450+	60+
CORRIDOR	NA	NA	NA
OFFICES	120	200	10
Conference Room	250	330	1
BREAKROOM	450	600	1
LOCKER ROOM	450	800	1
NURSES	300	500	7
STATION	300	500	2
STORAGE PATIOS	500	2000	7
PHARMACEUTICAL	300	500	7
STORAGE SANITATION	20	60	10
ROOM Storage	1200	1800	1
SOCIAL AREAS	600	900	7
THERAPY	600	900	2
ROOMS	500	700	1
Снаре	1125	1500	1
OTHER SPACE	1000	2000	
TOTAL	55,575	90,730	

FIG:58 SPACES SIZE CHART

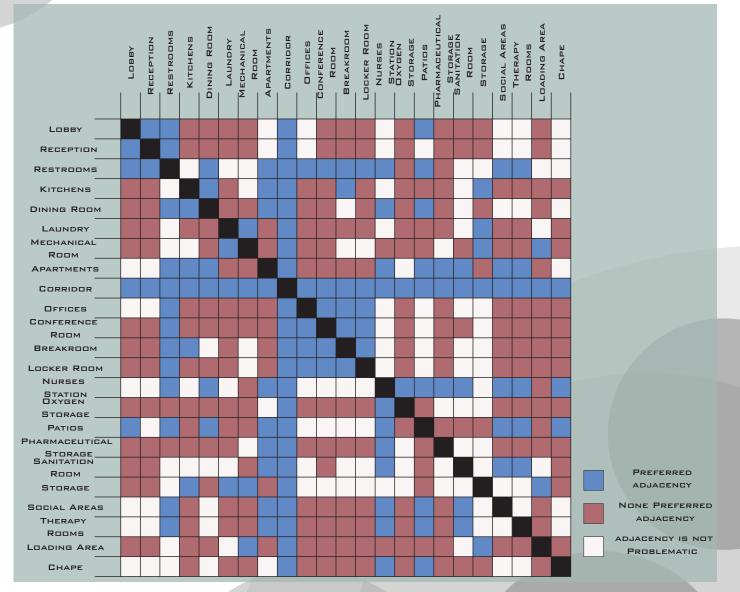


FIG:59 SPACE ALLOCATION TABLE

ENERGY CONSUMPTION: OVERALL, MOST FACILITIES SUCH AS THIS ONE USE A LITTLE UNDER 27 KILOWATT-HOURS OF ELECTRICITY ANNUALLY. MOST OF THIS IS IN LIGHTING, HOT WATER AND HEATING WHICH COMES OUT TO BE ABOUT 72% OF THE TOTAL ENERGY USED WITH THE OTHER 28% COMING FROM COOLING, COMPUTERS, AND OTHER MISALLIANCES USES. AS FOR THE 72% MOST OF THAT IS MADE UP OF LIGHTING AND HEATING MAKING THESE THE BEST CANDIDATES TO UTILIZES PASSIVE SYSTEMS TO HELP CUT DOWN ON THEIR ENERGY CONSUMPTION FOR THE FACILITY.

ENERGY CONSERVATION: ENERGY CONSERVATION THROUGHOUT THIS PROJECT WILL BE DONE IN SEVERAL WAYS. THE FIRST BEING THAT THE PROJECT WILL STRIVE TO ACHIEVE LEED SILVER OR HIGHER. THIS WILL BE DONE TO INSURE THAT THE PROJECT WILL BE ABLE TO LEAVE A SMALLER CARBON FOOT PRINT AND TO HELP CONSERVE ENERGY DURING THE OPERATION OF THE STRUCTURE THROUGH THE USE OF SEVERAL GREEN OR PASSIVE SYSTEMS TO HELP CUT DOWN ON ENERGY COST AS WELL AS POSSIBLE POLLUTION AND TO TRY AND CUT DOWN ON OPERATING COST TO INSURE THAT MOST OF THE DAILY OPERATION BUDGET WILL BE USED FOR THE RESIDENTS OF THE PROJECT. OTHER ENERGY CONSERVATION TECHNIQUES THAT WILL BE USED WITHIN THIS STRUCTURE WILL COME IN THE FORM OF OPTIMIZED LAYOUTS AND USES OF MATERIALS AND OVERALL CONSTRUCTION TO INSURE AS MUCH ENERGY IS CONSERVED AS POSSIBLE FOR THIS PROJECT.

ENVIRONMENTAL PERFORMANCE: THIS PROJECT WILL BE GEARED TOWARDS MINIMIZING ENVIRONMENTAL IMPACT AS MUCH AS POST WITHIN THE CONSTRAINTS OF THE SITE AND THE PROJECT ITSELF. THIS WILL BE DONE THROUGH SEVERAL METHODS SUCH AS AIMING FOR LEED SILVER OR HIGHER. THE USE OF PASSIVE SYSTEMS WITHIN CONSTRUCTION AND OPERATIONS OF THE STRUCTURE TO HELP CUT DOWN OF POSSIBLE POLLUTION AS WELL AS ENERGY USE OF THE STRUCTURE, AS WELL AS THE USES OF GARDENS AND LANDSCAPING TO HELP WITH OTHER MORE LOCALIZED ENVIRONMENTAL CONCERNS THROUGHOUT THE SITE SUCH AS RUNOFF, SNOW, AND SEVERE WEATHER. AS FOR OTHER ENVIRONMENTAL PERFORMANCES THAT THIS STRUCTURE WILL BE AIMING FOR, SUCH AS TEMPERATURE FOR INTERIOR SPACES WILL TRY TO MAINTAIN AROUND 73 - 76 DEGREES WITH INDIVIDUAL APARTMENTS AND SUITS BEING ABLE TO BE ADJUSTED FOR RESIDENTS PREFERENCES. FOR LIGHTING OF AREAS WITHIN THE FACILITY WE WILL AIM FOR BEING ON THE HIGHER END OF STANDARD LIGHTING SPACES DO TO HOW MANY RESIDENTS WITHIN THE FACILITY NEED BETTER AND MORE LIGHT TO PERFORM TASK AND TO NAVIGATE THE FACILITY THAN STAFF AND VISITORS. AS FOR OTHER ASPECTS SUCH AS ACOUSTICS WITHIN THE FACILITY WE WILL TRY TO MINIMIZE AS BEST AS WE CAN EXCESS NOISE FROM COMING INTO THE STRUCTURE OR BEING TRANSMITTED INTO THE RESIDENTS AREAS FORM THE STRUCTURE ITSELF TO PREVENT UPSETTING THE RESIDENTS OR CAUSING PROBLEMS DO TO NOISE LEVELS.

BEHAVIORAL PERFORMANCE: FOR THE USAGE OF THIS FACILITY, IT WILL BE OPERATING 24 HOURS A DAY AS WELL AS ALL YEAR LONG. WITH THERE BEING SEVERAL STAFF SHIFTS WITH 4 SHIFTS IN TOTAL TWO DURING THE DAY AND TWO AT NIGHT TO INSURE THAT RESIDENTS WILL HAVE ACCESS TO STAFF AND HELP IF NEEDED AT ALL TIMES DURING THE DAY AND NIGHT. AS FOR THE RESIDENTS THEMSELVES MOST WILL BE AT THE FACILITY DURING THE DAY WITH SOME, MOST LIKELY COMING AND GOING WITH FAMILY MEMBERS THROUGHOUT THE DAY. THE BUSIEST TIME FOR THE FACILITY WOULD MOST LIKELY BE AROUND THE AFTERNOON WITH RESIDENTS COMING AND GOING WITH FAMILY MEMBERS AS WELL AS FRIENDS AND FAMILY COMING TO VISIT RESIDENTS AND POSSIBLY ORGANIZATIONS COMING IN TO DO ACTIVITIES WITH THE RESIDENTS. AS FOR HOW THE FACILITY WILL OPERATE AT NIGHT WHICH WILL BE WHEN THE FACILITY SEES THE LEAST ACTIVITY. THERE WILL ONLY BE SOME MAINTENANCE STAFF AS WELL AS SOME NURSES AND THEIR AIDES TO MONITOR RESIDENTS TO HELP IN CASE OF EMERGENCY. MOST OF THE FACILITIES AMENITIES WILL BE CLOSED AS WELL DURING THE NIGHT DO TO POSSIBLE DANGERS THAT MAY OCCUR IF RESIDENTS WOULD TRY TO USE THEM DURING THE NIGHT.

PSYCHOLOGICAL IMPACT: THE PSYCHOLOGICAL IMPACT OF THIS FACILITY WILL BE THAT TO IMPROVE RESIDENT'S WAYFINDING ABILITY AND TO CREATE AN ENVIRONMENT THAT IS NOT OVERSTIMULATING TO THE RESIDENTS BUT ALSO COMES OFF AS A HOME LIKE EXPERIENCES. THIS WILL BE DONE THROUGH CREATING LAYOUTS THAT ALLOW RESIDENTS TO EASILY ORIENTATE THEMSELVES AND FIND THE PATH THAT THEY NEED TO GET TO THEIR DESTINATION WITH LITTLE TO NO HELP FROM STAFF. THE FACILITY WILL ALSO CREATE SPACES WITH ADEQUATE LIGHTING AND NOISE ALONG WITH TEMPERATURE LEVELS TO ALLOW RESIDENTS TO PERFORM TASK ON THEIR OWN WITH LITTLE HELP FROM STAFF. AS FOR THE AESTHETICS OF THE STRUCTURE. IT WILL AIM TO CREATE A MORE HOME LIKE EXPERIENCES USING MORE RESIDENTIAL FINISHES AND COVERINGS WHILE ALSO NOT OVER STIMULATING RESIDENTS WITH SUCH MATERIALS AND FINISHES ALONG WITH TRYING TO KEEP THESE FINISHES MORE NEUTRAL TO APPEAL TO ALL RESIDENTS WHILE MAINTAINING THE HOME LIKE EXPERIENCES. THE FACILITY AS A HOLE WILL TAKE ON A MORE RESIDENTIAL FEEL AND ASPECTS AS WELL WITH MORE RESIDENTIAL DIMENSIONS AND PROPORTIONS ALONG WITH UTILIZING THE NEIGHBORING RESIDENTIAL MATERIAL PALETTE AND LANDSCAPING STYLES.

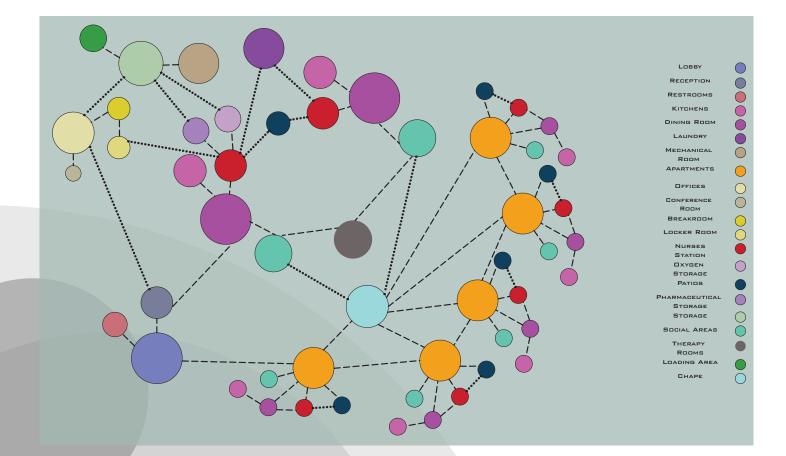


FIG:60 SPACE ADJACENCY CHART

ENVIRONMENTAL IMPACT: THE ENVIRONMENTAL IMPACT OF THE STRUCTURE WILL BE LOW DO TO SEVERAL ASPECTS SUCH AS THE SITE. WHICH DUE TO THE SITES SIZE AND SMALL NUMBER OF TREES THAT HAVE TO BE REMOVED THERE WILL BE LITTLE IMPACT TO THE ENVIRONMENT IN GENERAL. THE FACILITY WILL ALSO GO ABOUT ADDING MORE PLANT LIFE TO THE SITE THROUGH ITS USE OF LANDSCAPING AND GARDENS WITHIN THE SITE. THE ENVIRONMENTAL IMPACT OF THE FACILITY WILL ALSO BE LESSENED DUE TO PASSIVE AND GREEN BUILDING STRATEGIES THAT WILL BE IMPLANTED WITHIN THE FACILITY BOTH IN CONSTRUCTION AND OPERATION OF THE FACILITY.

CODE COMPLIANCES: THIS PROJECT WILL ADHERE TO ALL CODES LAID OUT WITHIN THE 2018 INTERNATIONAL BUILDING CODE AS WELL AS ALL THE REQUIREMENTS WITHIN THE CURRENT ADA RULES FOR CONSTRUCTION. THIS SITE IS LOCATED WITHIN GRAND FORKS ON THE NORTH DAKOTA SIDE OF THE RED RIVER, DO TO THIS ALL REQUIREMENTS AND LOCAL CODES FOR THE STATE OF NORTH DAKOTA WILL BE ADHERED TO AS WELL AS ANY AND ALL REGULATIONS AND CODES THAT THE COUNTY AND CITY OF GRAND FORKS REQUIREMENTS FOR A PROJECT OF THIS TYPE. TO INSURE THAT ALL THESE REQUIREMENTS ARE ADHERED TOO, THESE CODE BOOKS WILL BE REFERENCED THROUGHOUT THE PROCESS AS WELL AS PROFESSORS FROM NORTH DAKOTA STATE UNIVERSITIES ARCHITECTURE DEPARTMENT WILL BE ASKED TO LOOK OVER AND REVIEW THE PROJECT TO INSURE ADHERENCE TO THESE CODES AND REGULATIONS.

PROJECT COST: THE COST OF THIS FACILITY HAS NOT BEEN COMPLETELY DETERMINED YET. BUT ON AVERAGE THE COST FOR A LONG-TERM CARE FACILITY SUCH AS THIS ONE IS AROUND \$160 PER SQUARE FOOT. AS FOR THIS FACILITY DO TO ITS NATURE AND THE RESIDENTS THAT IT WILL BE CATERING TO, I BELIEVE THE OVERALL PRICES PER SQUARE FOOT WOULD MOST LIKELY BE AROUND \$200-\$270 PER SQUARE FOOT INSTEAD OF \$160.

SUMMARY: OVERALL, THIS PROJECT WILL BENEFIT THE SURROUNDING COMMUNITY IN MORE WAYS THAN ONE. IT WILL CREATE A PLACE THAT WILL BE ABLE TO TREAT AND CARE FOR PEOPLE WHOS HEALTH AND MENTAL CAPACITY ARE DECLINING DO TO AGE AND DISEASE. BUT IT WILL DO SO IN A DIGNIFIED MANNER THAT WILL ALLOW RESIDENTS TO MAINTAIN THEIR INDEPENDENCE AND ABILITY TO MAINTAIN RELATIVELY NORMAL LIVES BUT WITH THE SUPPORT IN PLACES THAT WILL BE ABLE TO HELP THEM. THROUGH THE USES OF DESIGN TO INFLUENCES THE BEHAVIOR AND PSYCHOLOGY OF THE RESIDENTS TO BETTER HELP THEM WITH EVERYDAY TASKS SUCH AS HOBBIES OR OTHER ACTIVITIES ALONG WITH ALLOWING THEM TO PERFORM TASKS INDEPENDENTLY OF STAFF.

IT WILL ACCOMPLISH ALL THIS THROUGH ADHERING TO ALL CODES THAT ARE REQUIRED FOR BOTH SAFETY AND ENVIRONMENTAL CONCERNS WHICH WILL BE ADDRESS THROUGH HOW THIS FACILITY WILL UTILIZES GREEN AND PASSIVES SYSTEMS THROUGHOUT ITS CONSTRUCTION AND OPERATION TO CUT DOWN ON ITS ENVIRONMENTAL IMPACT DUE TO ITS CONSTRUCTION AND OPERATION. WHILE ALSO BEING ABLE TO CUT DOWN ON ITS POWER CONSUMPTION WHICH WILL ALSO CUT DOWN ON ITS OVERALL ENVIRONMENTAL IMPACT. WITH A MAJOR PART OF THIS BEING IT ADHERES TO AND ACHIEVE LEED SILVER OR BETTER WHICH WILL DRASTICALLY IMPROVE ITS ENVIRONMENTAL IMPACT FOR THE BETTER. WHILE STILL PROVIDING A DESIGN THAT WILL BENEFIT THOSE WHO LIVE WITHIN THE FACILITY.

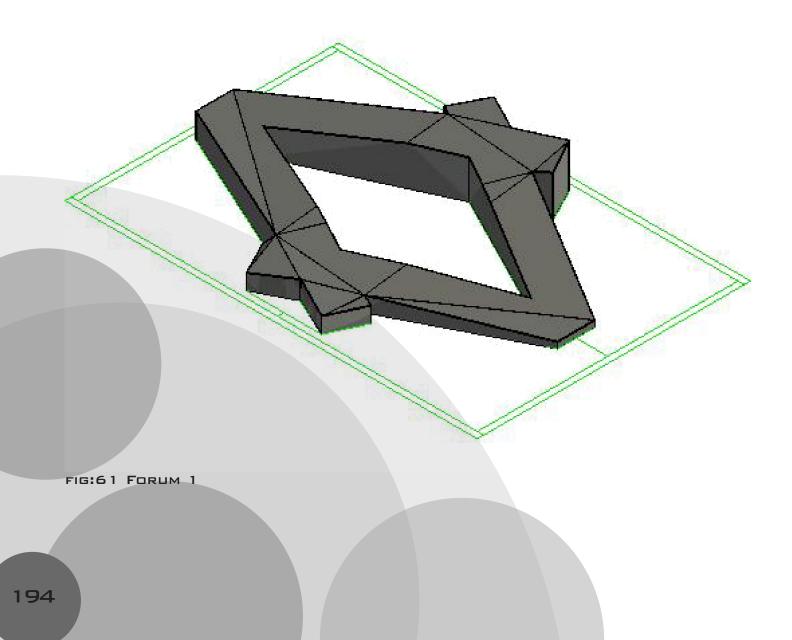
THE FINAL WAY IT WILL ACHIEVE ITS GOALS WILL BE THROUGH THE USES OF CAREFUL LAYOUT AND DESIGN THROUGH THE USES OF SPACES THAT WILL BE BEST SUITED FOR ALLOWING RESIDENCES TO FIND THEIR WAY AROUND AS WELL AS ALLOWING THEM TO REMAIN INDEPENDENT LONGER.

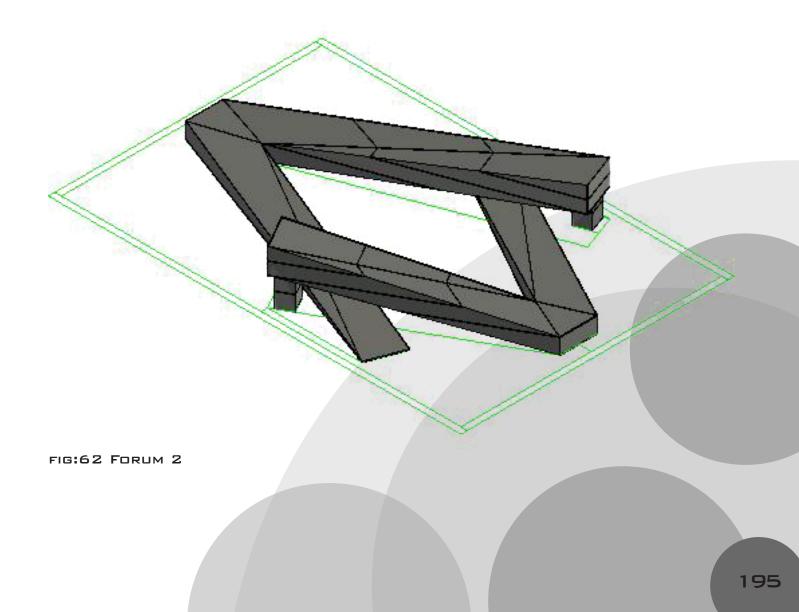
Overall, I feel that this project will achieve its goals for its performances criteria that have been roughly stated above. With these goals being categorized and measured such as lighting, heating and temperature, noise level and finally energy use. That the structure will be creating or coming onto the site. With many of these aspects of the project being measured or shown through charts, computer programs that will simulate different aspects of the project and finally through the uses of scale models to better help understand the structure as a hole. With the final criteria of how we will know when we have met these criteria being done through the project hitting points that will be set for each criteria. But overall, I feel that this project will meet all criteria set before it both those for care of the residents along with its operational goals and finally its environmental goals.

THE PROCESS THAT WAS UTILIZED FOR THE CREATION OF THIS PROJECT WAS STRAIGHTFORWARD. THE PROCESS STARTED WITH THE RESEARCH OF ALZHEIMER'S AND OTHER MEMORY PROBLEMS ALONG WITH HOW LONG-TERM CARE FACILITIES NORMALLY WOULD BE CREATED AND HOW THEY FUNCTION. THIS WAS FOLLOWED BY MORE TARGETED RESEARCH ON LAYOUT AND FORUM WHICH WAS FOUND THAT LINEAR OR SLIGHT TURNS PREFERRED FOR SUCH FACILITY. THE FORUM OF SUCH A FACILITY CAN VARY GREATLY ALONG AS THE INTERNAL LAYOUT IS FAIRLY LINEAR IN LAYOUT. THIS WAS ALSO FOLLOWED BY RESEARCH INTO MATERIAL TEXTURES COLOR AND LIGHT. WITH FINDINGS THAT MATERIAL SHOULD MORE HOME-LIKE IN STYLES SUCH AS USING WOOD, STONE, OR OTHER MATERIALS THAT WOULD NORMALLY BE FOUND IN A RESIDENTIAL HOME OR APARTMENTS, AS WELL AS MATERIALS SHOULD BE SIMPLE IN TEXTURE AND COLOR DUE TO POSSIBLE HALLUCINATIONS THAT CAN BE CAUSED BY THEM ALONG WITH COLOR NEEDING TO BE MORE VIBRANT THAN NORMAL AS TO ALLOW RESIDENTS TO BETTER SEE THE COLOR DIFFERENCE ALSO WITH THE COLOR NEEDING TO BE ON THE WARMER SIDE AS TO BETTER KEEP A MORE HOME-LIKE FEELING.

LIGHTING SHOULD BE ON THE HIGHER END OF THE RECOMMENDED FOR A SPACE THAT IS BEING LIT. THIS WAS FOUND TO BE NEEDED TO PREVENT FALLS DUE TO SHADOWS CAUSING RESIDENTS TO BE DISORIENTED DUE TO SHADOWS BEING PRESERVED AS CHANGES IN HEIGHT OR MATERIAL CHANGES WHICH CAN CAUSE RESIDENTS TO TRY TO AVOID THEM WHICH COULD CAUSE FALLS. THE LIGHT WAS ALSO FOUND TO IMPROVE THE MOOD OF RESIDENTS, AS WELL AS MORE TASK LIGHTING, WOULD BE NEEDED THAN NORMAL FOR RESIDENTS. NATURE SHOULD ALSO USE BE WHEREVER POSSIBLE AS MANY RESIDENTS WISH TO HAVE EASY ACCESS TO NATURAL AREAS. WHICH HAS BEEN SHOWN TO INCREASE HAPPINESS AND SCENES OF FREEDOMS WITHIN RESIDENTS.

ALL OF THESE FINDINGS WERE THEN USED TO SET THE MAJOR KEY REQUIREMENTS FOR THE STRUCTURE ALONG WITH GRAND FORKS BUILDING CODE AS WELL AS THE SITE REQUIREMENTS. ALL OF THESE REQUIREMENTS WERE THEN ENTERED INTO THE OVERALL FORUM THAT WAS CHOSEN WHICH WAS AN OVERLAPPING V SHAPE. THIS WAS CHOSEN DUE TO THE NATURE THAT AN INTERNAL COURTYARD WAS DESIRED FOR THE RESIDENTS AS WELL AS ALLOWING THE STRUCTURE TO BLOCK SOUTHEAST DIRECTIONS ALONG WITH PROVIDING VIEWS AS WELL AS LIGHT TO ENTER THE APARTMENTS. SEVERAL FORUMS WERE CREATED BEFORE SETTLING ON AN OVERALL FORUM FOR THE STRUCTURE WHICH WILL GO OVER MORE IN THE DESIGN SOLUTION SECTION.





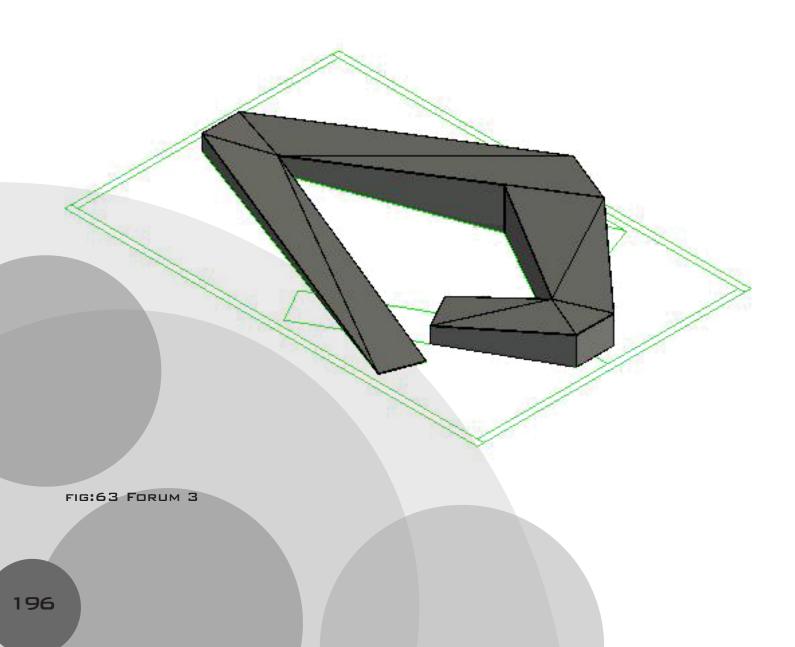
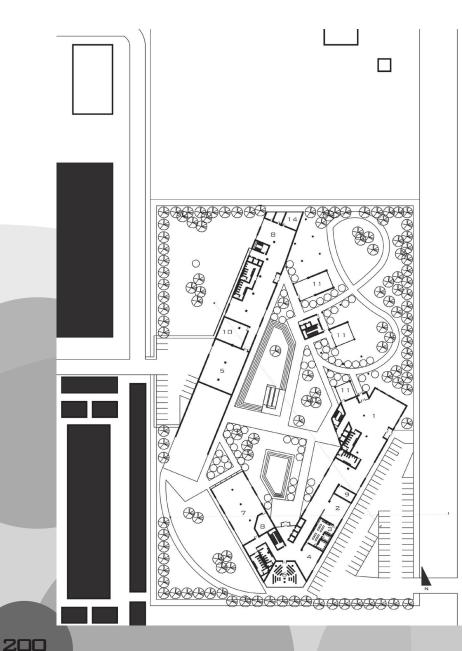




FIG:64 FINAL FORUM

THE OVERALL SOLUTION THAT WAS DECIDED ON WAS A V SHAPE DORM TO ALLOW RESIDENTS TO HAVE ACCESS TO AN INTERNAL COURTYARD. THE FORM ITSELF IS ONE V SHAPE THAT ANGLES DOWN TO THE GROUND THEN MOVES UP TO THE SECOND FLOOR WITH THIS ENTIRE RAMP BEING A GREEN ROOF WITH MECHANICAL AND ADMINISTRATION AREAS UNDER THIS RAMP THE OTHER V SHAPE HOUSES THE MAIN APARTMENTS ALONG WITH THE RECREATION AREAS WITHIN THE FACILITY. THIS FORM CAN BE SEEN BELOW.

The interior of the structure is laid out with the main administration and machinal areas located on the ground floor along with a library, cafes, chapel, as well as conference areas, and a main reception area for the facility. With the upper floors containing the apartments along with other recreation facilities. Each of the apartments is angled at 45 degrees to allow the creation of interior front yard areas along the corridors. This can be seen on the plans this is done to allow residents to create a more homelike experience as well as to allow residents to better find their rooms easier and act as anchor points. The floors are also offset which can be seen below. This is done to allow better forums for rooms as well as creating green space for residents.

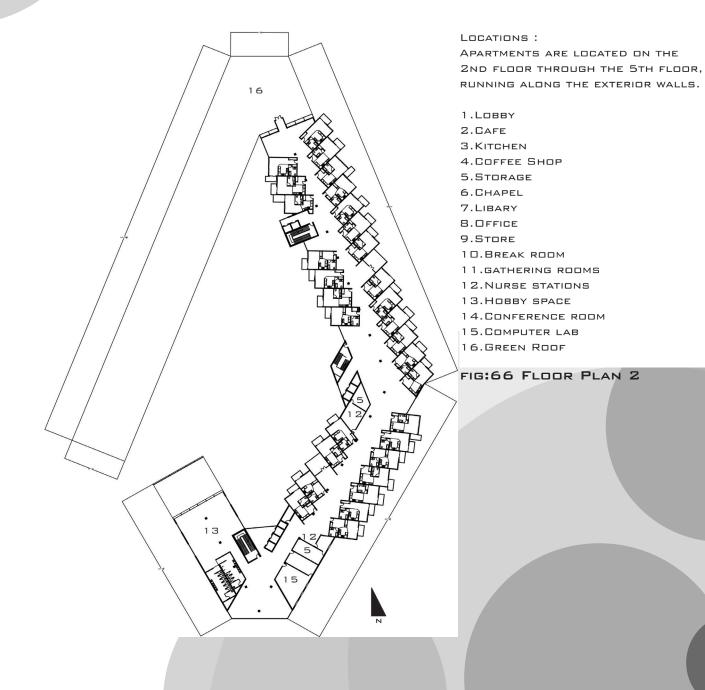


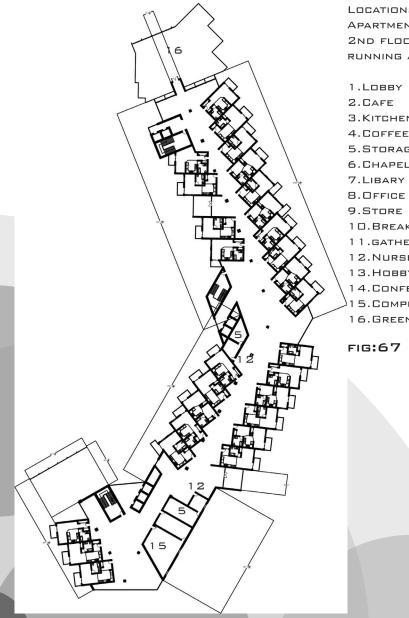
LOCATIONS :

APARTMENTS ARE LOCATED ON THE 2ND FLOOR THROUGH THE 5TH FLOOR, RUNNING ALONG THE EXTERIOR WALLS.

- 1.LOBBY
- 2.CAFE
- 3.KITCHEN
- 4.COFFEE SHOP
- 5.STORAGE
- 6.CHAPEL
- 7.LIBARY
- 8.OFFICE
- 9.STORE
- 10.BREAK ROOM
- 11.GATHERING ROOMS
- 12.NURSE STATIONS
- 13.HOBBY SPACE
- 14.CONFERENCE ROOM
- 15.COMPUTER LAB
- 16.GREEN ROOF

FIG:65 SITE / FLOOR PLAN 1

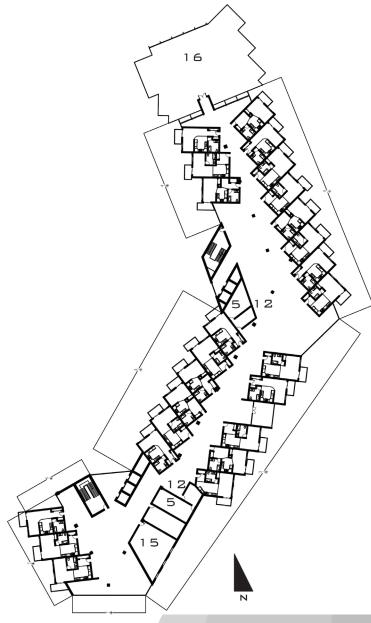




LOCATIONS :

APARTMENTS ARE LOCATED ON THE 2ND FLOOR THROUGH THE 5TH FLOOR, RUNNING ALONG THE EXTERIOR WALLS.

- 1.LOBBY 2.CAFE 3.KITCHEN
- 4.COFFEE SHOP
- 5.STORAGE
- 6.CHAPEL
- 7.LIBARY
- 9.STORE
- 10.BREAK ROOM
- 11.GATHERING ROOMS
- 12.NURSE STATIONS
- 13.HOBBY SPACE
- 14.CONFERENCE ROOM
- 15.COMPUTER LAB
- 16.GREEN ROOF
- FIG:67 FLOOR PLAN 3

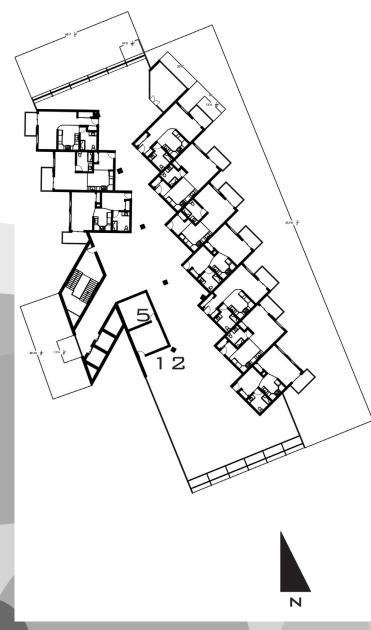


LOCATIONS :

APARTMENTS ARE LOCATED ON THE 2ND FLOOR THROUGH THE 5TH FLOOR, RUNNING ALONG THE EXTERIOR WALLS.

- 1.LOBBY
- 2.CAFE
- 3.KITCHEN
- 4.COFFEE SHOP
- 5.STORAGE
- 6.CHAPEL
- 7.LIBARY
- 8.OFFICE
- 9.STORE
- 10.BREAK ROOM
- 11.GATHERING ROOMS
- 12.NURSE STATIONS
- 13.HOBBY SPACE
- 14.Conference Room
- 15.COMPUTER LAB
- 16.GREEN ROOF

FIG:68 FLOOR PLAN 4



#### LOCATIONS :

APARTMENTS ARE LOCATED ON THE 2ND FLOOR THROUGH THE 5TH FLOOR, RUNNING ALONG THE EXTERIOR WALLS.

- 1.LOBBY
- 2.CAFE
- 3.KITCHEN
- 4.COFFEE SHOP
- 5.STORAGE
- 6.CHAPEL
- 7.LIBARY
- 8.OFFICE
- 9.STORE
- 10.BREAK ROOM
- 11.GATHERING ROOMS
- 12.NURSE STATIONS
- 13.HOBBY SPACE
- 14.CONFERENCE ROOM
- 15.COMPUTER LAB
- 16.GREEN ROOF

#### FIG:69 FLOOR PLAN 5

GREEN DESIGN WITHIN THE STRUCTURE WAS DESIGNED TO MEET LEED SILVER STANDARDS. WHICH IT DOES THROUGH LANDSCAPING AND GREEN ROOFS TO ACT AS COOLING AND DRAINAGE FOR THE SITE. IT ALSO WORKS WITH A GREYWATER RECYCLING SYSTEM IN THE FORUM OF WATERING THE SITE AS WELL AS USE IN THE BLACK WATER SYSTEM. OTHER GREEN STRATEGIES ARE IN THE FORM OF RECYCLED MATERIALS SUCH AS CARPING BEING USED AS WELL AS THE USES OF PRECAST ELEMENTS COMING FROM THE NEARBY PREFABRICATION PLANT LOCATED NEAR THE SITE.

THESE RENDERS BEST SHOWN THE INTERIOR OF ONE OF THE APARTMENTS THIS SHOWS ONE OF THE FOUR LAYOUTS WITHIN THE STRUCTURE. WITH A FULL KITCHEN AND LIVING AND SLEEPING AREAS WITH INDIRECT LIGHTING IN THE FORUM OF THE MOLDING ALONG THE EDGE OF THE ROOM.



FIG:70 APARTMENT RENDER 1



FIG:71 APARTMENT RENDER 2

THESE INTERIOR RENDERS SHOWCASE THE GROUND FLOOR MAIN CORRIDOR LOOKING INTO THE MAIN COURTYARD. THIS RENDERS BEST SHOWS THE MATERIAL AS WELL AS POSSIBLE INTERNAL PLANTERS THAT WOULD BE USED IN THE SECOND RENDER SHOWCASE ONE OF THE SITTING AREAS ON THE APARTMENT FLOORS. WHICH SHOWCASE MATERIALS AS WELL AS LIGHTING FOR THESE AREAS.



FIG:72 INTERIOR CORRIDOR RENDER



FIG:73 INTERIOR SEATING AREA RENDER

THESE EXTERIOR RENDERS SHOWCASE THE GREEN SCAPE AS WELL AS THE OVERALL FORUM OF THE STRUCTURE AS WELL AS THE GREEN SPACES WITHIN THE STRUCTURE. THESE SPACES WERE CREATED TO ALLOW RESIDENTS TO ACCESS GREEN AREAS AS WELL AS TO HELP WITH THE COOLING OF THE STRUCTURE AND DRAINAGE ON THE SITE.



FIG:74 EXTERIOR RENDER 1



FIG:75 EXTERIOR RENDER 2



FIG:76 EXTERIOR RENDER 3



FIG:77 EXTERIOR RENDER 4



FIG:78 EXTERIOR RENDER 5



FIG:79 EXTERIOR RENDER 6

# ANALYSIS OF TYPOLOGY / GOALS / EMPHASIS

THE OVERALL TYPOLOGY OF THIS PROJECT FITS WITHIN THE TYPOLOGY OF LONG-TERM CARE FACILITIES AS WELL AS A MIXTURE OF A MIXED-USE RESIDENTIAL AREA. THE TYPOLOGY OF THE PROJECT DIFFERS FROM STANDARD LONG-TERM CARE FACILITIES DUE TO HOW THERE ARE MORE SEMI-PUBLIC PRIVATE AREAS ALONG WITH LARGER MORE STANDER RESIDENTIAL APARTMENTS INSTEAD OF THE SMALLER SUITS THAT SUCH FACILITIES TEND TO HAVE. THE TYPOLOGY ALSO DIFFERS DUE TO MORE MIXED USES ON THE GROUND FLOORS THAN NORMAL AS WELL AS A LARGER CONNECTION TO NATURE AND THE LARGER COMMUNITY THAN MOST FACILITIES LIKE THIS HAVE. THESE CHANGES ARE FOR THE BEST BECAUSE THESE CHANGES ALLOW FOR A BETTER MORE HOME-LIKE EXPERIENCE WHICH WOULD ALLOW RESIDENTS TO BE HAPPIER AND BE ABLE TO LIVE A MORE FULLING LIFE AS THEY CAN BE MORE CONNECTED TO NATURE AND THE COMMUNITY.

THE GOALS FOR THIS PROJECT I BELIEVE HAVE BEEN MET. I SAY THIS AS IT INCORPORATES ALL THE MAJOR COMPONENTS THAT HAVE BEEN DISCUSSED IN THE PROPOSAL AS IT MEETS THE GREEN STANDARDS ALONG WITH THE RESIDENTIAL STANDARDS AS WELL AS THE ROOM STANDARDS THAT HAVE BEEN SET FOR THIS PROJECT WITHIN THE PROPOSAL FOR THE PROJECT. THIS PROJECT ALSO MEETS THE REQUIREMENTS FOR THE FUNCTIONING OF A LONG-TERM CARE FACILITY OF ITS TYPE UTILIZING THE MOST MODERN AND CURRENT FINDINGS FOR A DESIGN THAT WE HAVE FOR CREATING A FACILITY LIKE THIS ONE.

### ANALYSIS OF

### TYPOLOGY / GOALS / EMPHASIS

THE PROJECT EMPHASIS CREATING A FACILITY THAT ALLOWS RESIDENTS SUFFERING FROM DEMENTIA OR ALZHEIMER'S ALONG WITH ANY OTHER PERSON SUFFERING FROM AGE-RELATED DISEASES TO LIVE A LIFE OF MORE FREEDOM AND A BETTER STANDARD OF LIVING FOR THEM. I WOULD SAY THAT THIS PROJECT HAS ACCOMPLISHED THIS TASK FOR THE MOST PART AS IT HAS CREATED A FACILITY THAT DOES ACCOMPLISH THIS EMPHASIS OF CREATING A FREER ENVIRONMENT FOR THE RESIDENTS THROUGH THE USE OF THE LAYOUT AND THE CONNECTS NATURE AND THE COMMUNITY. THOUGHT THIS CANNOT BE PROVEN UNLESS THE STRUCTURE WAS BUILT AND OPERATED TO SEE IF IT WAS FUNCTIONING AS IT SHOULD.

# POSSIBLE CHANGES TO THE PROJECT

DURING THE FINAL CRITIQUE OF THE THESIS PROJECT, THERE ARE WHERE SEVERAL CHANGES WERE SUGGESTED FOR IMPROVEMENTS THAT COULD BE MADE TO THE PROJECT. THESE IMPROVEMENTS THAT WERE SUGGESTED INCLUDED IMPROVEMENTS TO APARTMENT LAYOUTS AND HALLWAYS AREAS AND STRUCTURE ALONG WITH SLIGHT ORIENTATION CHANGES FOR THE PROJECT AND FINALLY SOME EXTERIOR FORM CHANGES.

IMPROVEMENT'S LAYOUTS AND APARTMENT CHANGES THAT WERE SUGGEST WERE FOR SLIGHT CHANGES IN UPPER FLOORS FOR THE ROOMS SPECIALIZED ROOMS DEDICATED FOR THOSE RESIDENTS WITH ALZHEIMER'S OR OTHER MEMORY ISSUES. THESE CHANGES INCLUDED STRAIGHTENING OR REMOVING THE SAWTOOTH FORM LOCATED WITHIN THE HALLWAY. THE OTHER CHANGE TO LAYOUT IS FOR THE LAYOUT OF THE RESIDENTIAL HALLWAYS SHOULD BE STRAIGHTENED TO ALLOW FOR BETTER ACCESS FOR THE RESIDENTS. THE STRUCTURAL CHANGE THAT WAS SUGGEST WAS FOR INSTEAD OF ONE CENTRAL COLUMN SYSTEM THROUGH THE BUILDING THERE SHOULD BE TWO LINES OF PARALLEL COLUMNS FLANKING THE HALLWAY TO ALLOW FOR A MORE USABLE HALLWAY LAYOUT.

# POSSIBLE CHANGES TO THE PROJECT

As for the improvements suggested for the overall forum and orientation of the structure, there were two suggested for it they are to change the oration for the structure to allow more light into the southern section of the main courtyard along with to allow more light to enter the main structure. The other major forum change that was suggest was to instead of having a uniform façade / forum across the structure would be to create a more organic form with apartments exterior facade forming into one or having more push and pull aspects within the exterior of the structure.

# CRITIQUE OF RESEARCH IN THE CREATION OF THE PROJECT

OVERALL, I FEEL THAT THE RESEARCH DONE FOR THIS PROJECT WAS DONE TO A HIGH QUALITY AS WELL AS BEING VERY THOROUGH THOUGH | WOULD STATE THAT MORE INTERVIEWS SHOULD HAVE BEEN CONDUCTED TO BETTER GET AN UNDERSTANDING OF RESIDENTS FROM DIFFERENT FACILITIES AS WELL AS STAFF FROM A DIFFERENT FACILITY, TO GET A BETTER MORE COMPREHENSIVE UNDERSTANDING OF HOW ONE WOULD WORK IN THIS FACILITY ALONG WITH HOW RESIDENT FEEL ABOUT BEING IN THESE FACILITIES. THE OTHER ASPECTS OF THE RESEARCH THAT WAS CONDUCTED SUCH AS THE CASE STUDIES THAT WERE CONDUCTED ALLOWED A LARGE NUMBER OF FINDINGS OF THE HOW FACILITIES AROUND THE WORLD AS WELL AS HOW DIFFERENT SIZE OF FACILITIES AND AGES. THE CASE STUDIES IN GENERAL I BELIEVE ARE CONSISTENT AND INFORMATIVE IN NATURE THOU I BELIEVE THAT THERE SHOULD BE AT LEAST 3 MORE CASE STUDIES TO INCREASE A BETTER UNDERSTANDING OF THE CREATION AND LAYOUT OF THESE FACILITIES. THOU OVERALL I FEEL THAT THE RESEARCH CONDUCTED WITHIN THIS PROJECT IS CONCISE AND INFORMATIVE.

# THESIS BOARDS



FIG:80 THESIS BOARD 1

# THESIS BOARDS

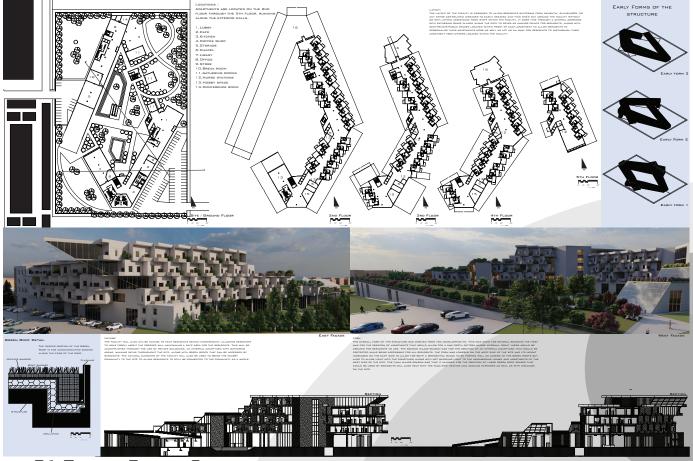


FIG:81 THESIS BOARD 2

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#### INTERVIEW RESIDENT

WHAT ASPECTS OF DAILY LIFE DO YOU FEEL YOU HAVE THE MOST TROBLE WITH AND WHAT ASPECTS DO YOU FEEL YOU HAVE THE LEAST TROUBLE WITH?

IM NOT SURE.

IS THERE CERTAIN AREAS THAT YOU FIND MORE DIFFICULT TO FIND YOUR WAY TOO OR FROM?

I BEEN UNDER QUARANTINE, SO YOU CAN NOT GO BACK OR FORTH IN THE FACILLITY.

IS THERE ANY ASPECTS OF THE CURRENT DESIGN OF THE FACILITY THAT YOU FEEL HINDER YOU DURING YOUR DAILY LIFE?

IM UNSURE.

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WHAT IS YOUR THOUGHT PROCESS FOR WHEN YOU WISH TO GO SOMEWHERE?

IM NOT SURE. You can't go anywhere due to quarantine.

IS THERE PORTION OR ASPECTS OF ROOMS YOU REMBER BETTER THAN OTHER ASPECTS OF A ROOM?

CAN'T REMBER QUITE ANYTHING OF DOWN STAIRS.

#### INTERVIEW RESIDENT

ARE THERE CERTAIN LIGHT LEVELS THAT YOU HAVE THE EASIEST TIME SEEING OR WORKING IN?

LIGH LEVELS FOR DOING TASKS ARE GOOD. BRIGHT.

WHAT WOULD YOU SAY IS THE MOST DIFFICULT ASPECT OF FINDING YOUR WAY TO A LOCATION?

IM NOT REALLY SURE.

DO YOU HAVE ANY TRICKS OR WAYS THAT YOU USE THAT HELP YOU TO REMBER OBJECTS, TASKS, OR LOCATIONS AND IF SO WHAT WOULD THEY BE?

NO, NOT REALLY.

HOW OFTEN DO YOU FEEL YOU MAY NEED HELP TO FIND YOUR WAY AROUND?

CAN'T SAY BECASUES NURESE TAKE US ANYWHERE THAT WE NEED TO GO DO TO THE QUARANTINE.

WHAT DO YOU FEEL COULD BE DONE OR CHANGED TO ALLOW YOU TO BETTER FIND YOUR WAY AROUND?

I DON'T KNOW.

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#### INTERVIEW RESIDENT

IS THERE ASPECTS OF THE FACILITY DESIGN THAT YOU FIND ENJOYABLE TO USE IF SO WHAT ARE THEY?

LIKE MY ROOM VERY WELL. Its big.

INTERVIEW STAFF

WHAT ARE SOME OF THE MOST COMMON ASPECTS OF DAY TO DAY LIFE DO YOU HELP RESIDENTS WITH THE MOST?

HOUSE KEEPING. A CLOSE SECOND, PERSONAL CARE, HELPING IN REST ROOMS AND DRESSING AND UNDRESSING.

ARE THERE ASPECTS WITHIN CERTAIN ROOMS OR AREAS THTA YOU NOTICED THAT HELP OR HINDER RESIDENTS OR YOUR WORK WITH RESIDENTS?

QUITE A FEW TIMES DO TO FURNITURE OR GIFTS.

WHAT ROOMS SEEM TO BE THE HARDEST FOR RESIDENTS TO FIND?

IN THE PAST FINDING BATHROOMS IN THERE HOME IF THEY HAVE DEMENTIA OR ALZHEIMER'S.

HAVE YOU NOTICED ANY ASPECTS OF THE FACILITY THAT EITHER HINDER OR HELP WITH YOUR DAY TO DAY TASKS?

No.

DO RESIDENTS SEEM MORE NERVOUS OR AGITATED IN CERTAIN ROOMS OR SPACES, AND IF SO WOULD YOU BE ABLE TO DISCRIBE THE SPACE?

THOSE WITH DEMENTIA OR ALZHEIMER'S ARE MOST RELAXED IN OWN HOME OR ROOM, BUT IF GOING OUT IT CAN CAUSE CONFUSION.

#### INTERVIEW STAFF

HAVE YOU NOTICED LIGHT OF A ROOM CAUSING DIFFRENT BEHAVIOR WITHIN RESIDENTS?

NOT THAT I NOTICED.

IS THERE CERTAIN DEFINING CHARACTERISTICS OF A ROOM THAT RESIDENTS SEEM TO REMBER MORE THAN OTHERS?

NOT THAT I AM AWARE OF, IF THEY DO I HAVE NOT HEARD IT MENTIONED.

INTERVIEW STAFF

WHAT ARE SOME OF THE MOST COMMON ASPECTS OF DAY TO DAY LIFE DO YOU HELP RESIDENTS WITH THE MOST?

BATHS, DRESS, MEDS AND CHANGING THEM AS THEY ARE COMPLETELY DEPENDENT.

ARE THERE ASPECTS WITHIN CERTAIN ROOMS OR AREAS THTA YOU NOTICED THAT HELP OR HINDER RESIDENTS OR YOUR WORK WITH RESIDENTS?

NO ALL ARE IN CUSTOM WHEEL CHAIRS AN G TUBES WITH THEM BEING LOCATED ALL ON ONE LEVEL WITH WIDER HALLS.

WHAT ROOMS SEEM TO BE THE HARDEST FOR RESIDENTS TO FIND?

NOT SURE WE MOVE THEM ABOUT THE PLACE.

HAVE YOU NOTICED ANY ASPECTS OF THE FACILITY THAT EITHER HINDER OR HELP WITH YOUR DAY TO DAY TASKS?

NOT REALLY.

DO RESIDENTS SEEM MORE NERVOUS OR AGITATED IN CERTAIN ROOMS OR SPACES, AND IF SO WOULD YOU BE ABLE TO DISCRIBE THE SPACE?

I DON'T THINK SO BECAUSE IT IS THERE HOME THAT THEY ARE IN.

#### INTERVIEW STAFF

HAVE YOU NOTICED LIGHT OF A ROOM CAUSING DIFFRENT BEHAVIOR WITHIN RESIDENTS?

IF IT IS OVERCAST THEY WILL SLEEP MORE THAN IF IT IS SUNNY THEN THEY WILL BE MORE ACTIVE.

IS THERE CERTAIN DEFINING CHARACTERISTICS OF A ROOM THAT RESIDENTS SEEM TO REMBER MORE THAN OTHERS?

NOT THAT I KNOW OF.

#### PREVIOUS STUDIO EXPERIENCE

2ND YEAR - FALL 2017, ARCH 271, MARFA TEXAS COMMUNITY HOUSE, MULTI USE DOWNTOWN FARGO, MILTON S. YERGENS / SPRING 2018, ARCH 272, TEA HOUSE, BOAT HOUSE, DARYAL BOOKER

3rd year - Fall 2018, Arch 371, Oscar zero museum, fjord Look out, Regin Schwaen / Spring 2019, Arch 372, Archive, Moorhead mall art gallery transformation, Ronald Ramsay

4TH YEAR - FALL 2019, ARCH 471, HIGH RISE, DAVID CRUTCHFIELD / Spring 2020, Arch 472, Marvin Windows Home, Mark Barnhouse

5TH YEAR - FALL 2020, ARCH 771, AGINCOURT IWOA PROJECT, RONALD RAMSAY / SPRING 2021, ARCH 772, DESIGN THESIS, MEMORY AND HEALTH, BAKR ALY AHMED