

Common Ground

Bridging the Gap through Generations
Adaptive Reuse of an Intergenerational Learning Center

Alexandra Hirstein

"The great privilege is given to all to develop strength of character, to lead clean and honest lives, to render diligent and worthy service, to help others, and to be loyal citizens of the republic and obedient to its laws."

-An inscription occupying the frieze on the exterior façade of the building

Common Ground

Bridging the Gap through Generations | An Intergenerational Learning Center

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

By
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In Partial Fulfillment of the Requirements
For the Degree of
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thesis abstract

This thesis aims to explore how preschoolers and the elderly interact and learn from one another and how a bond like this can rise above differences in age and ability. With neither their pasts nor futures in common, the relationships between the young children and the elderly residents exist entirely in the present. The typology from which to examine this inquiry is best achieved through an architectural exploration of an independent living facility for the elderly and a preschool that emphasizes intergenerational learning.

This design thesis adaptively reuses the former St. Louis County Jail to house an Intergenerational Learning Center, located in the Downtown Waterfront District of Duluth, Minnesota. Examining how generationally segregated we are as a society and working to bring that back together within a historically preserved building generates a significant portion of my research and design exploration. The unique architectural features of the jail have the opportunity to bring new life and spirit to the building and create a welcoming design in a former place of punishment. The research incorporated in this thesis deals extensively with the existing building in order to protect and promote the original character as well as how to create successful interactions between the elderly and preschoolers.

narrative

A new movement of sustainable, architectural thinking has come about in the past few decades that allows buildings to be historically preserved and new typologies to be implemented. Seeing former bowling alleys serve a neighborhood as a charter school, or historic grain mills becoming breweries or high end lofts proves that architecture can last and can continue to serve a community despite its original program no longer serving a purpose. Because of the unique challenges of historic jails' unusual architectural designs and features, including minimal natural lighting, steel jail cells, and small square footages, people often choose to tear them down instead of revitalizing these historic buildings.

What can you successfully implement into an old jail in order to revitalize the area and create a space no longer reminiscent of its harrowing past?



revitalized site plan

narrative

The original St. Louis County Jail building was in use until jail functions moved to a new facility in 1995 and it has remained vacant ever since. Sitting on a prime piece of real estate in the heart of Downtown Duluth, this site provides beautiful views of Lake Superior as well as the nearby Lift Bridge, Canal Park and Downtown Waterfront District. In order to preserve the historic structure of the building and save the jail from demolition, a new program must be implemented that will add considerable value to the downtown Civic Center area. The main challenge for this site is the need to reposition the building socially, and attempt to turn a vacant reminder of trouble into a place people feel compelled to be a part of.

The former jail site will be used to create a unique, mixed-use neighborhood of apartments and spaces to socialize for the elderly, learning spaces for preschoolers, as well as areas for these groups to interact on common ground, an Intergenerational Learning Center.

narrative

This redevelopment process focuses on the harrowing statistics surrounding today's senior citizens. Not only is the number of adults 65 years and older expected to double within the next 30 years (Ortman, Velkoff, Hogan, 2014), but almost half of older adults experience social isolation, which is closely related to and can potentially lead to health changes such as depression as well as a general physical and mental decline (Stevenson, 2014). Additionally, over 70% of adults participating in a survey said that sustaining intergenerational relationships has a positive effect on the elderly family member's overall well-being (Generations United, 2014).

Evan Briggs, an adjunct professor at Seattle University, has studied aging in America and people's relationships with the elderly extensively. She describes how elderly residents do "complete transformations in the presense of children" and how they may seem "half alive, sometimes asleep" until the kids walk in the room and immediately, the residents flourish.

With a society that is so generationally segregated, how can a building work to bridge the generational gap and create common ground for these two different groups of people?

narrative

This site selection provides many challenges but also many distinct opportunities. Since the proposed site is located right downtown Duluth, the accessibility and walkability of the site prove to be a great advantage for elderly residents who hope to maintain some semblance of independence. This building is located on the edge of the Downtown Business District, which allows the facility to have aspects of a neighborhood environment and of the bustling downtown atmosphere. The American Journal of Public Health published a study that revealed that older adults living in walkable, mixed-use neighborhoods have higher levels of social interaction and psychological well-being compared with those residing in suburbs or less walkable neighborhoods.

Living in walkable communities results in higher chances of knowing your neighbors, participating in politics, and engaging socially (American Journal of Public Health, 2013).



figure 3 | existing building sketch

narrative

The topography of the city of Duluth also creates interesting opportunities and is an area of concentration as the entire city lies on a hill falling towards Lake Superior. By investigating a site that resides on this steep hill, unique opportunities come about for exterior recreational areas and elements, such as using the hill and many trees on the existing site as a way to create a private but inviting space for residents and children to enjoy safely.

As Duluth's economy relies heavily on tourism, implementing a program that depends on local citizens instead of the regular travelers, this thesis design has the opportunity to create an architectural design that won't be affected by dramatic changes in climate or economy.



figure 4 | north pier lighthouse



figure 5 | canal park + lift bridge

project typology

Typology

Independent living for the elderly | Preschool | Intergenerational Learning Center
Adaptive Reuse | Historic Preservation

Justification

With the demand for senior housing on the rise, building designs need to evolve to provide stimulating and engaging environments for the elderly to retire to in order to work to eliminate social isolation and loneliness within the elderly community.

Adaptive reuse allows existing, obsolete infrastructure to breath new life and positively influence the needs of a community.



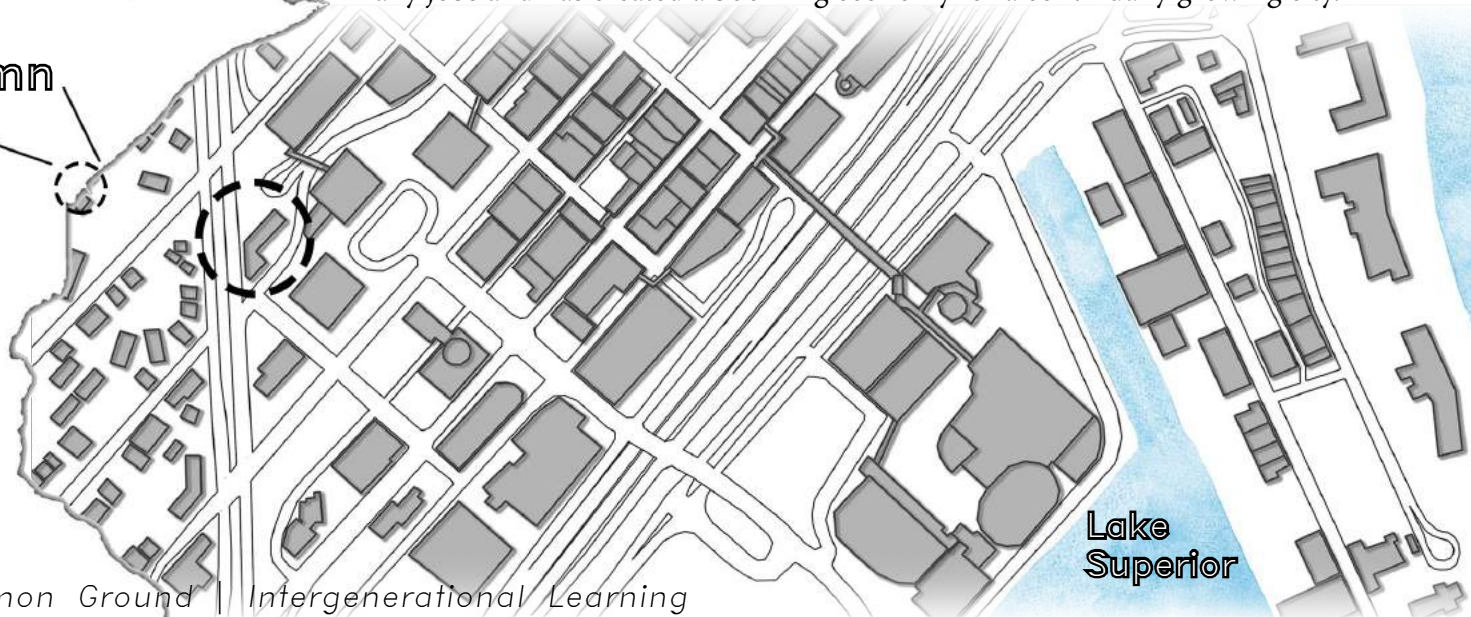
figure 6 | site section

Common Ground | Intergenerational Learning
Alexandra Hirstein

site information

The site is located in Duluth as part of the Historic Civic Center. Duluth is a thriving city where you can explore hundreds of miles of trails, enjoy meals at five-star restaurants, visit a plethora of museums, and experience amazing views while you're at it. Home to 90,000 residents and two college campuses, the University of Minnesota Duluth and St. Scholastica, it is a bustling city on the largest freshwater lake in the world, Lake Superior. While much of Duluth's economy relies on tourism, the shipping industry also provides many jobs and has created a booming economy for a continually growing city.

duluth, mn



Lake
Superior

site information

Address 521 W Second Street
Duluth, MN, 55802
Historic Civic Center
Downtown Waterfront District

Proposed Area Approximately 32,000 square feet
0.76 acres

Zoning Form District 5 | Iconic Building
Mid-Rise Mixed-Use Buildings
Care Facility | Assisted Living

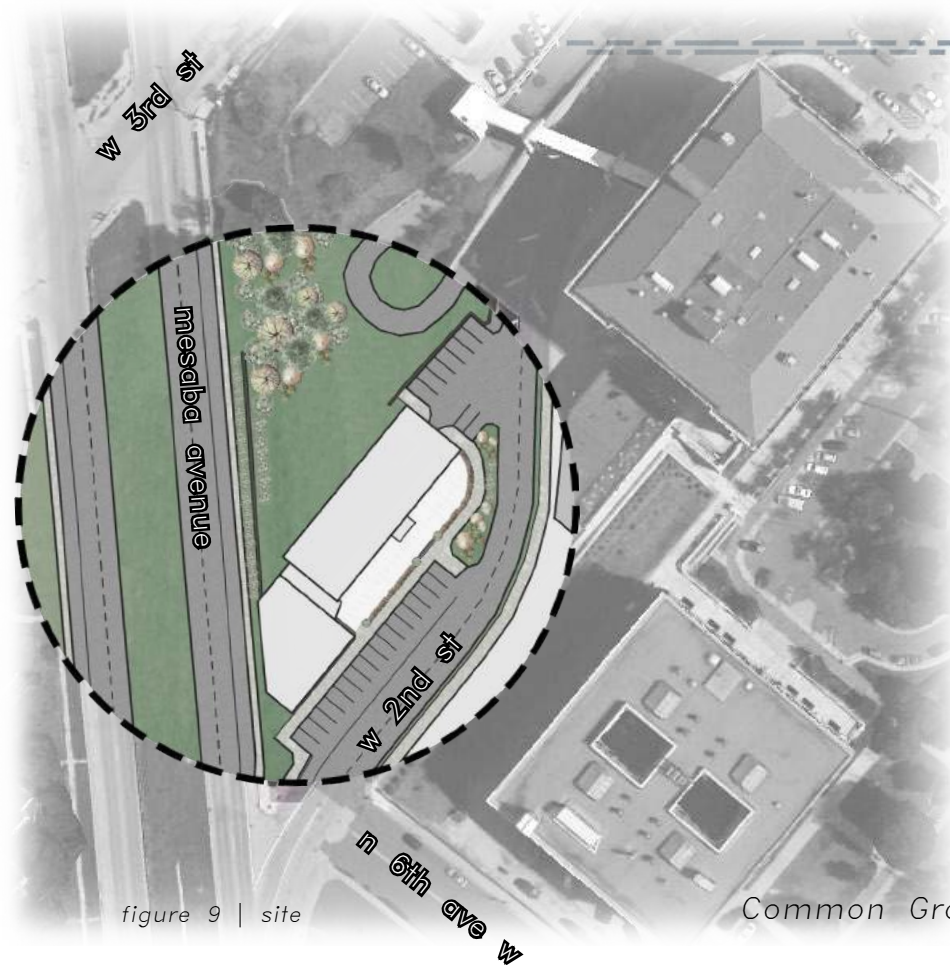


figure 9 | site

major project elements



figure 10 | coffee bar



figure 11 | fifth floor gathering space

Senior Living

- Apartment units
- Exercise and Therapy Room
- Resident Storage
- Laundry
- Communal Gathering Spaces
- Dining | Kitchen area

Preschool

- Classrooms

Public Spaces

- Intergenerational Learning Center
- Exterior Recreation | Playground
- Service and Loading Provisions
- Coffee Bar

user description

Senior Citizens Residents of the building are senior citizens residing in 30 independent living apartments. On-site parking is available for long-term residents and guests if needed.

Preschoolers Children aged 3-5 partaking in morning and afternoon preschool classes. Drop-off and pick-up areas will be available for the caretakers.

Employees Trained healthcare professionals will be brought in on occasion to assist residents. Preschool teachers will be a part of a successful building plan.

Visitors Family members and friends of the residents and preschoolers are present in the living quarters and the public spaces within the building.

user description



Peak hours in the Intergenerational Learning Center are during the day while the children are in school. Visiting hours are throughout the entire day, and residents live inside the facility 24/7.

On-site parking is limited because of the building's downtown location and the lack of parking currently relegated to the site. Visitors share a parking lot with the neighboring Civic Center while drop off and pick up lanes and short term parking options are available in front of the building.

Public spaces on the first floor allow social interaction to occur on-site. Creating an inviting site design engages the residents to experience the surrounding downtown areas and helps welcome locals into the building and coffee shop.

project emphasis



figure 13 | front pillar

The main project emphasis for this design thesis is to successfully adaptively reuse an unusual existing building. Creating a functional facility that is a successful addition to the community, but also honors the vast history of the property and all that have lived within those four walls. In addition, jails are often seen as hostile environments so transforming and repositioning the jail into a positive environment is a challenge and a definite emphasis throughout this design exploration.



figure 14 | front overhang

Emphasis is also on implementing a program that interests and is of value to the local community as well as helps alleviate a need within the city. Studying the gaps and connections between the senior citizens and the preschoolers and allowing them to live in the present in this facility is a major emphasis throughout this project.

typological research

dignity | providence mount st. vincent
local | the 400 apartments
service | grace living center
community | ebenezer ridges campus

case study 1 providence mount st. vincent



figure 15 | pmsv, 1924



figure 16 | pmsv, 1967

Architect John Graham & Associates

Location Seattle, Washington

Typology Living Care Community for older adults

Size 300,000 square feet

Completion 1924 | redesigned in 1967 and 1991

Major Project Elements

Assisted living program

Nursing care

Transitional Care Unit

Rehabilitation

Preschool

Gift shop | thrift shop | barber

Chapel

providence mount st. vincent case study 1

The revitalization of the Providence Mount St. Vincent senior-living care facility in West Seattle in 1991 is what makes this building a thought-provoking case study. The main goal of the redesign was to create an environment that promotes the physical and spiritual well-being of adults who no longer can care for themselves. They wanted to provoke a cultural change within senior centers across the country as well as establish a community environment directed by the residents. The approach for the building redevelopment is striking in that the original building was from the 1920's, however the renovations done to it have completely revitalized the current facility as if it were a new build. This differs from some case studies and mirrors others; however it creates a sharp contrast from the revitalization of the historic Jail as I work to preserve and honor the façades and the interior architectural character.

"a place where people come to live, not to die"
— Charlene Boyd, facility administrator



figure 17 | pmsv aerial view

case study 1 providence mount st. vincent

This state-of-the-art facility serves nearly 400 individuals and emphasizes the residents' ability to make their own decisions. While the nursing home is located on floors 2-5, a preschool has found its home on the first floor. Children 6 weeks to 5 years old interact with Mount St. Vincent residents five days a week in an Intergenerational Learning facility. This preschool has been operating within the senior center for over 20 years as a way to add to the community, revitalize the residents, and make sure that the last years of life are meaningful and engaging. The Learning Center has proven to be a popular option for families looking to expose their children to the realities of an aging community; the preschool is currently capped at 125 children and hosts a waitlist of over two years.

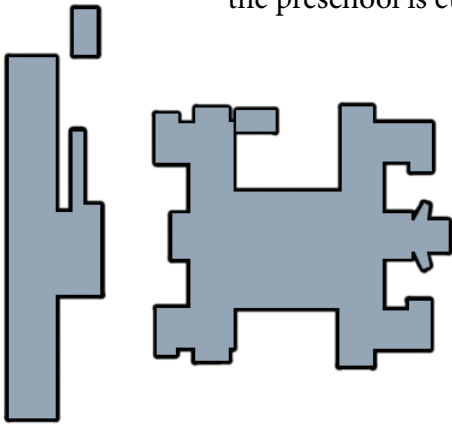


figure 18 | pmsv building layout



figure 19 | west elevation

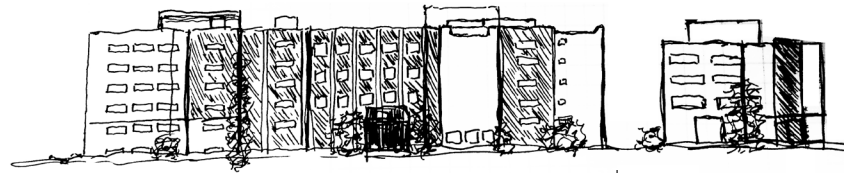


figure 20 | north elevation

providence mount st. vincent case study 1

In addition to the Intergenerational Learning Center, Mount St. Vincent mirrors this thesis design in its desire to integrate the local community with the residents. The public is always welcome, school groups visit frequently, and church groups and choirs perform during the holidays. In addition, tenants go on regular outings throughout the community. Creating a vibrant and social facility for the elderly and children to thrive within is incredibly important throughout my architectural design exploration.

Architecturally, this building has stood on its original footprint since it was built in 1924. It has gone through a few redesign phases; first in 1967 and most recently in 1991 as it morphed to include the Intergenerational Learning Center. The most dramatic aspect of the architectural revitalization is that the long, hospital-like corridors in the nursing home were renovated into clusters of resident rooms around a common living, dining, and staff area. This case study is an interesting comparison to my architectural exploration in that my plan is to historically preserve and adaptively reuse the original jail façades. In this case, while they kept the same footprint, the renovations brought about an entirely new exterior façade, as well as the interior design and furnishings hardly resemble the original building.

Providence Mount St. Vincent's shift in philosophy during the renovation period made their priorities clear; residents retain the dignity and influence they have known all their lives in the warmth of a social-based community.

case study 2 the 400 apartments



figure 21 | powers hotel drawing, 1916



figure 22 | powers hotel, 1936

Architect Hancock Brothers | William F. Kurke

Location Fargo, North Dakota

Typology Elderly Housing

Size 30,298 square feet

Completion 1914 | rehabilitated in 1981

Major Project Elements
Affordable elderly housing
Downtown environment
Adjoining Restaurant
Community Space
Rooftop Patio

the 400 apartments case study 2

The 400 Apartments located on the northwest corner of Broadway and Fourth Avenue N have long been a downtown staple in Fargo, ND. This Classical Revival architectural style building's first three floors were built in 1914, designed by the Hancock Brothers and William F. Kurke as the Powers Hotel. The owner and builder was the Powers Construction Company, headed by Thomas Powers.

After just a few years and a booming economy surrounding the First World War, the top two floors were added in 1919. The addition included the Powers Hotel name block between the third and fourth floors, and removing the original parapet for a more elaborate one that provides a focal point and a more substantial presence overlooking Broadway. The family-run Powers Hotel shut its doors in October, 1981. The building was purchased by the 400 Associates Partnership to be rehabilitated into affordable elderly housing.

This senior housing community operates alongside the project-based Section 8 Federal Housing Program in order to assist the lower income elderly residing in the Fargo-Moorhead area. Section 8 assistance means that the renters pay no more than 30% of their adjusted income.



figure 23 | parapet detail



figure 24 | hotel pamphlet, 1939

case study 2 the 400 apartments

Established in 1982, The 400 Apartments house 41 rent-assisted units, which is made up of 39 one-bedroom units and 2 two-bedroom units. This facility works as an apartment building for residents who want to live independently, but may need some assistance.

While they employ no help themselves, residents are encouraged to hire a homemaker service if needed, to help with laundry, groceries, or with everyday tasks like food preparation and cleaning. They also integrated a rooftop patio for some much desired private outdoor space.

One of the main goals for the 400 Housing Project as an independent living facility is to allow the residents to develop and maintain a healthy lifestyle while merging a historic building with the latest innovations for senior living. Encouraging residents to move around and socialize with their peers in communal spaces helps raise residents' moral and can become an important aspect of their lives.



figure 25 | the 400 apartments, 2009

the 400 apartments case study 2



figure 26 | site plan

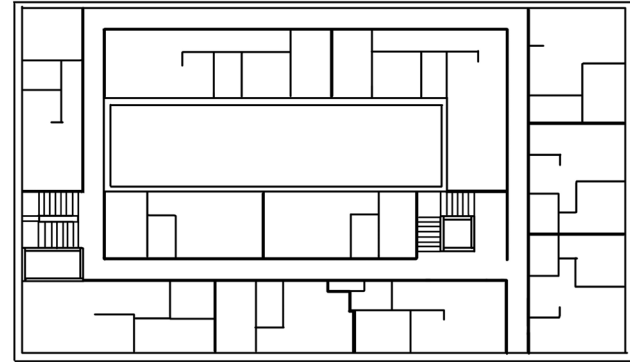


figure 27 | second floor plan

The 400 Apartments were listed on the National Register of Historic Places in May 1983. It was deemed significant for its architectural style and for its influential role in the commercial development of North Broadway in Fargo, North Dakota.

The importance of this in response to my thesis design comes from the regulations regarding renovations among architecturally significant buildings on the National Register of Historic Places. Learning from an architecturally significant building like this can help when attempting to maintain code standards but also create dramatic improvements both inside and outside of the jail facility.

case study 2 the 400 apartments

The most valuable aspect of this typological research study is its downtown, urban setting. The 400 Apartments' struggles with parking and evoking the feeling of a spacious environment in a small urban site are some of the main considerations when revitalizing the St. Louis County Jail in Duluth. With just 15 parking spots available, this site has similar parking issues as the jail's site. Six are allotted to the adjoining restaurant, two are kept for maintenance workers, which leaves seven parking stalls for the manager to rent out to residents as monthly parking passes. On the proposed site, implementing parking spots for handicap accessibility and drop off and pick up areas will allow for sufficient on-site provisions. Residents can purchase passes to park in front of the building, or in the adjoining Civic Center parking ramp. The contributions this case study made to the understanding of my architectural design exploration are vital to the success of this project. The residents' access to local businesses and the walkability of the site allow residents to live independent lives, while also getting the assistance they may need to complete daily tasks.

Another important design aspect of this research are the storage lockers in the basement of the facility that allow residents to store off-season items. Integrating lockers into the historic jail restoration will create more value per apartment as they will have ample storage space within the building.



figure 28 | rooftop patio

grace living center case study 3

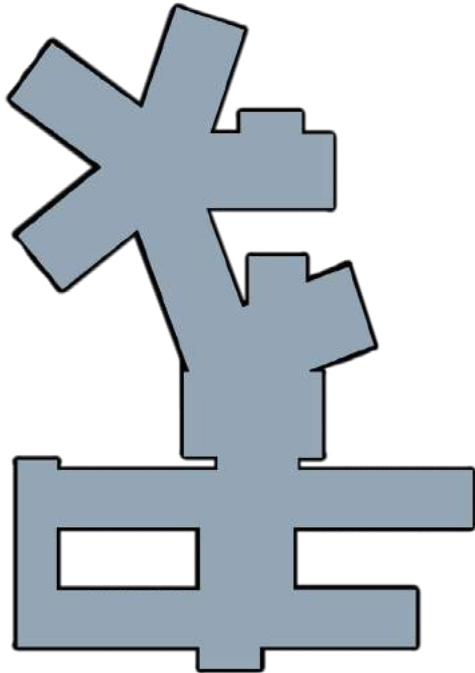


figure 29 | building layout

Location Jenks, Oklahoma

Typology Living Center for the elderly

Completion 1998

Major Project Elements
Nursing care
Physical and Occupational therapy
Speech Language pathology
Rehabilitation
Jenks Public School Preschool
Library | Salon | Chapel | Ice cream parlor



figure 30 | interior atrium

case study 3 grace living center

The Grace Living Center philosophy, “It’s not about being in a home, but simply about being home” makes them an ideal typological case study for this thesis exploration. Grace Jenks considers themselves a family-oriented environment that emphasizes and promotes person-centered care. With over 25 facilities located throughout Oklahoma, the company’s emphasis is on total well-being in order to address each resident’s specific physical and emotional needs. After coming under new ownership in 1998, this facility was drastically renovated and refurbished to become what it is today.



figure 31 | aerial view

grace living center case study 3

The Grace Living Center Jenks offers a wide range of rehabilitative and personal care services that help address the needs of the elderly who have experienced injuries, surgeries, or simply can no longer care for themselves. With over 160 beds, they boast a decently large facility, but with the care and attention of a smaller nursing home. This case study correlates well typologically to my own design exploration with its emphasis on person-centered care and the way it highlights the daily interactions between the elderly and preschoolers.

Incorporated into the Grace Living Center in Jenks, Oklahoma are a set of classrooms where about 60 four and five year olds are enrolled in Preschool and Kindergarten classes. The local Jenks Public School district created a partnership with the nursing home to promote daily activities and interactions between the children and the Grace Elders. This typological research study illustrates an interesting opportunity for the jail redesign in that a potential partnership with a school system in Duluth could occur down the road to integrate the community even further in the building and Intergenerational Learning Center.



figure 32 | entry condition

case study 3 grace living center

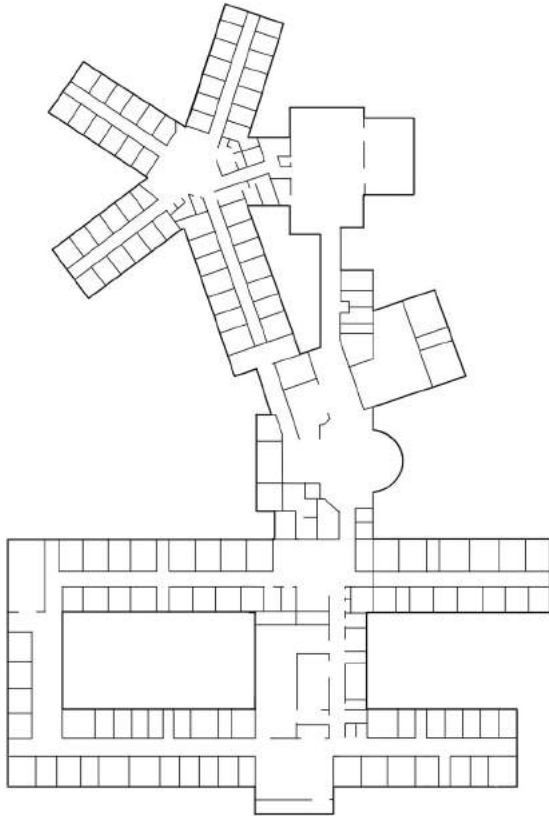


figure 33 | floor plan

The spirit and energy of the building is found in the employee's ability and desire to service patients with compassion and dignity and in their recognition and commitment to each resident's interest in order to keep everyone happy, healthy, and fully engaged in life.

The radial building layout on the north end of the Grace Living Center allows for all of the wings of the nursing home to gain optimal natural daylighting into each of the rooms as well as to the central core. Radial organizations often speak to the idea that what occurs in the wings radiate out from and revolve around the central hub. This central space is crucial to the employees of the facility as it is the organizational area and office spaces for the nurses. This idea contributes to my thesis exploration as the building layout and circulation can be integrated in a way that creates a focal area in the Intergenerational Learning Center for residents and preschoolers to congregate or create meaningful interactions.

ebenezer ridges campus case study 4

Location Burnsville, Minnesota

Typology Senior Living Center

Completion 1976 | Additions in 2002

Major Project Elements

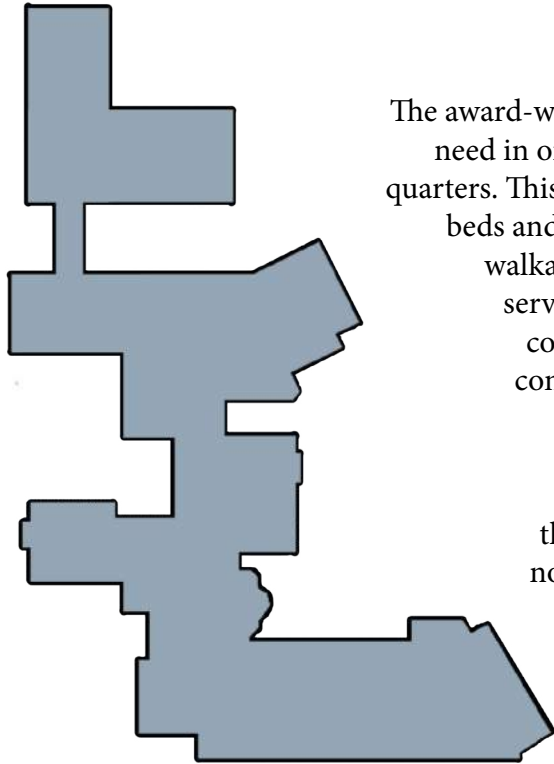
- Nursing care
- Memory care
- Short-term rehabilitation
- Assisted Living apartments
- Long-term care
- Adult day programs
- Child care
- Partnership with the Hosanna! Lutheran Church

community



figure 34 | exterior approach

case study 4 ebenezer ridges campus



The award-winning Ebenezer Ridges Campus community has everything seniors need in order to make positive transitions into healthy, and meaningful living quarters. This unique, faith-based facility has 34 Medicare and Medicaid-licensed beds and boasts a child care center with intergenerational opportunities. The walkability of this facility is an important factor because all the individual services Ebenezer provides are in distinct areas of the campus but are all connected for easy accessibility for the elderly residents. Watching the constant flow of people throughout the different programs and services helps visualize this facility's success.

Fairview Health Services provides vibrant senior living choices all throughout Minnesota. The Ebenezer Ridges Campus specifically is a not for profit organization that provides a full-range of senior housing options, medical care, and community outreach programs that are designed to look and feel more like a personal residence rather than a health care facility.

figure 35 | building layout

ebenezer ridges campus case study 4

The Ebenezer Intergenerational Day Program provides a child care program for 56 infants, toddlers, and preschoolers which integrates daily interactions with residents and participants within the adult day programs. During the summer months, the Ebenezer Ridges Child Care Program hosts up to 71 children. In addition to story time, arts and crafts, and special events, the elderly help oversee outdoor activities as well. Programs like this help build healthy and promising relationships between the young and the old and help promote social, emotional, physical, and educational growth for both children in their first years of life and the elderly, who continue to benefit and grow from these opportunities.



figure 36 | arbor lane assisted living

case study 4 ebenezer ridges campus

Ebenezer has been providing quality senior assistance throughout Minnesota since 1917. Architecturally, the building has had various renovations and expansions throughout the years, including an addition of a nearby senior living facility in 2012. The Ebenezer Ridges Campus redesigned and incorporated the incredibly successful child care center and the Intergenerational Day Program alongside their adult day program into their building functions in 2002.

This campus is much larger than the other case studies included in my research, however Ebenezer uses this to their advantage by providing many outdoor activities that allow residents and patients the opportunity to explore the campus independently. This also creates a more positive environment for the children to play outside during the warm months.



figure 37 | aerial view

ebenezer ridges campus case study 4

A benefit to this facility compared to the other typological research studies is its flexibility in room choices. Ebenezer Ridges provides both private and double rooms for patients and residents. Through this architectural exploration, the historic St. Louis County Jail will aim to house only one bedroom apartments for the elderly residents. Because of the lack of square footage and the focus on independent living instead of rehabilitation centers or nursing homes, this becomes the most logical architectural design. While the residents will be able to live independently and privately, they will also have access to communal spaces where group interactions can occur and residents can find companionship.

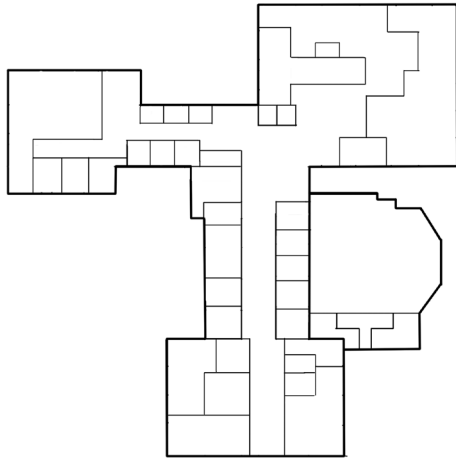


figure 38 | first floor plan

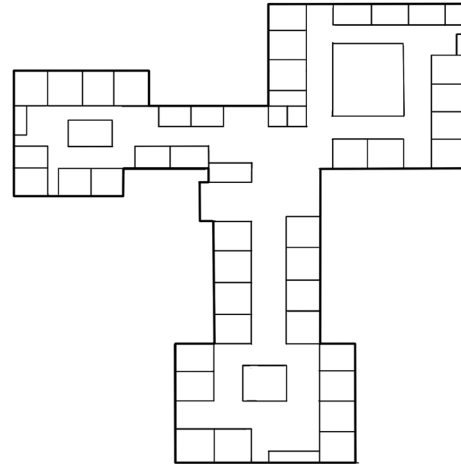


figure 39 | second and third floor plan

typological summary



figure 40 | daily interactions



figure 41 | daily interactions

The statistics surrounding intergenerational interactions are proven each and every day. Older adults that are consistently involved with these programs tend to have larger social networks, better communication skills and memory, and tend to be more optimistic and have a greater desire to care for themselves. The children also reap immense benefits from consistently interacting with people of all age groups; specifically the residents, but also the teachers, families, and friends that visit the building.

Children are taught to respect the elderly and show compassion and patience for their physical limitations, while the adults maintain much more self-worth by sharing their lives and past experiences with the children. These preschoolers have the chance to create meaningful and spirited interactions as well as bring joy and improve the quality of life for the senior citizens. In addition, the encouragement and attention from the elderly help the young children thrive.

As the baby boomers begin to age, people are looking for care facilities that provide stimulating and engaging environments to retire to. As an additional incentive for the implementation of an Intergenerational Learning Center into this building design, nearby, downtown child care centers and preschools will help to benefit local company's employee recruitment and retention because of the vast advantages of walkability, among other things.

typological summary

The case studies examined all prove to be influential aspects of my final architectural design. These four case studies include the Providence Mount St. Vincent Living Care Community, The 400 Apartments affordable elderly housing, the Grace Living Center Care Services, and the Ebenezer Ridges Campus Senior Living Center. While all four service the elderly, each architectural design incorporates distinct types of senior care and building design approaches.

Picking a characterizing term for each case study helped narrow the Historic Jail's new building program into a single aspect of the design that will influence the final thesis design. By analyzing distinct aspects of each case study, a successful building program can be formulated within the given typology.

dignity | local | service | community

These evocative words center the focus for the final thesis program and aid in shaping the mixed-use typology to include independent elderly living, a preschool, the Intergenerational Learning Center, and a coffee bar. and supplementary amenities. It is imperative to integrate aspects from these the various case studies in order to create a smooth transition for the historic St. Louis County Jail into an Intergenerational Learning Center. Through my typological research studies, I was able to uncover certain patterns as well as discrepancies between them.

typological summary

After extensive examinations of the building programs, similar strategies in spatial layouts became apparent. Many of the main aspects of these elderly care facilities were arranged in similar fashion.

Some design considerations to be made from this research include creating clusters of residents in “neighborhoods”. Having “households” like this are becoming the new norm in long-term care environments. Emily Chmielewski, author of *Excellence in Design: Optimal Living Spaces*, states that the physical environment of a cluster of residents allows for “smaller social groupings with shorter walking distances to common living spaces”. Additionally, this idea gives residents a greater level of independence because they have close access to more social experiences.

One aspect of the building layouts that I deemed significant in both Ebenezer Ridges Campus and Grace Living Center is that the spaces are distinct both in appearance and their overall layout. With both the elderly residents and the young children, mirrored floor plans may become confusing. In order to reduce confusion and disorientation among residents, creating distinct areas or floors will be imperative to maintaining independent lifestyles.

The proposed Intergenerational Learning Center holds great potential to evolve design standards for care facilities for the aging population looking into the future. These case studies all illustrate benefits to joining these two groups together and creating an innovative successful building program.

unifying idea research

This neoclassical building located within the Duluth Civic Center Historic District embodies a public building worthy of revitalization and a new program implementation. In addition, this building is listed on the National Register of Historic Places and will continue to serve the city of Duluth looking into the future. The opportunity arises to create something new and inviting within a restricted, inflexible existing floor plan. In addition, there is an opportunity to work alongside and learn about the regulations for rehabilitating a historic building on the NRHP. One of the most important questions to be answered through the architectural exploration of an adaptive reuse into an Intergenerational Learning Center deals with people's social interactions with the site.

How do you socially reposition the St. Louis County Jail from a former place of punishment into an independent living facility for the elderly, learning spaces for preschoolers, and common ground to interact on.

unifying idea research

When residents, preschoolers, locals, and visitors walk into the building, they pass under the original stone entrance with the original manifesto illustrated on the frieze for all to see.

“The great privilege is given to all to develop strength of character, to lead clean and honest lives, to render diligent and worthy service, to help others, and to be loyal citizens of the republic and obedient to its laws.”

While speaking with a few locals, many pointed out this quote as a source of inspiration for the inmates while they did time, as well as for the citizens of Duluth, reminding them that everyone gets to choose each day to make a positive impact on their community.

The approach for implementating a new building program into the historic jail must look at specific tactics to embrace the original aesthetic and goals of the facility. While the objective is to socially reposition the site into a new, spirited Intergenerational Learning Center, there are aspects of the jail’s harrowing past and the principles it stood by that can be used in the redevelopment process. Concepts such as bettering their lives, “developing strength of character”, and striving to live “clean and honest lives” were priorities that inmates strived to live by as well as ideas that community members continue to embody.

The physical and mental “scars” of the existing building are a part of the history of the site and there is a design opportunity for it to be emphasized and celebrated. With this in mind, the program strives to maintain and honor some of the former jail’s notions and spatial layouts while also creating an innovative facility that eliminates any inkling of barriers, lack of freedom, or the building’s former program.

unifying idea research

There is an incredible psychological impact of a project like this on the residents and the community that interact with the site on a regular basis. It is estimated that right now, about 11,000 senior centers serve nearly 10 million older adults each day (Senior Homes, 2015). With this number continuously growing as our population gets older, there needs to be more innovative and accommodating options available for seniors in response to the constantly changing demands of this field. One of the most effective options according to research done by the Healthy Aging Partnership is maintaining positive social interactions between residents and the outside world (Qualls, 2014). Implementing a preschool alongside these apartments and allocating designated Intergenerational Learning spaces for these groups to come together allows for more social interaction and therefore helps reduce social isolation.

In 1970, there were about four million elderly people in the United States that experienced some sort of behavioral problems. As of 2030, it is estimated by the American Psychological Association that this number will quadruple and over 15 million senior citizens will experience behavioral problems (APA, 2015). Programs like this where elders gain a sense of purpose works to eliminate the helplessness many elders feel upon entering retirement facilities.



figure 42 | "grandpa" paul and kindergarteners



figure 43 | "grandma" betty and preschoolers

unifying idea research



figure 44 | ILC

With the baby boomers fast approaching the age of retirement, there will continue to be noticeable changes in senior living options as the elderly are living longer and show a desire to remain engaged as active members of the community well after hitting 65. Opportunities to engage with preschoolers can help eliminate trends of boredom and loneliness in the current aging population. Creating opportunities for residents to interact with the kids in a classroom or playground gives them a sense of purpose that tends to increase levels of satisfaction (Rook, 1984).

These relationships go both ways; children benefit as they are able to engage with their elders and learn to appreciate the knowledge and relationships attained over a lifetime of experience. Rich social and emotional learning is found in environments like the one proposed for the rehabilitation of the St. Louis County Jail.

unifying idea research

Each of the typological research studies were investigated for specific aspects of their building design. Providence Mount Saint Vincent illustrates an ideal relationship between the elderly and children that I hope to implement into the adaptive reuse of the historic jail. With over 400 residents and 125 preschoolers, this is much larger than what can be crafted in the jail, however the interactions between these groups occur on a daily basis and allow for meaningful exchanges that blossom into valuable friendships. The preschool and Intergenerational Learning facility occupy the first floor of PMSV and the elderly residents occupy the upper four floors. This spatial organization exemplifies a successful program layout that can be mirrored in the redesign of the jail. The success of this spatial organization derives from the minimal separation it creates between the elderly apartments and the preschoolers' classrooms. It allows for meaningful interactions in the proper places but also gives residents their own private spaces.

The 400 Apartments in Fargo, North Dakota provide my architectural explorations with plenty of information and inspiration due to its vast similarities with the historic jail site. Similar building and site size drives the commonalities between the buildings as they house a similar number of residents, spatial layout breakdown, lack of parking, and a place on the National Register of Historic Places. Highlighting the character in the jail rehabilitation will be of utmost importance as to not lose the building's historic unreplicable qualities.



figure 45 | pmsv entrance



figure 46 | the 400 entrance

unifying idea research



figure 47 | glc entrance

One of the most influential aspects of the Grace Living Center for my project is the dedicated partnership the facility has with the Jenks Public School District in Oklahoma. This partnership illustrates the value the school district and nursing home see in intergenerational interactions and provides an opportunity to look into potential partnerships with local schools in the Duluth area. The size of the Grace Living Center is once again much larger in comparison to the proposed thesis site as there are about 170 elderly residents and 60 preschool and Kindergarten students interacting with residents within the facility. While it is a large facility, their emphasis on the intergenerational interactions is something that can also be highlighted in the redesign of the historic St. Louis County Jail site.



figure 48 | ebenezer entrance

The Ebenezer Ridges Campus in Minnesota illustrates a full range of opportunities that can be incorporated into the proposed thesis design. This facility houses nursing and memory care, short and long term rehabilitation, assisted living apartments, and adult day care options in addition to the childcare center that oversees 55-70 infants, toddlers, and preschoolers. Including daily community activities is an option to consider as it allows there to be permanent elders living within the facility, but also creates a destination and allows other senior citizens to stop. This flexibility creates a more spirited and ever-changing environment for both the residents and preschoolers.

project justification

Minnesota has always prided itself in being a leader in sustainable practices. Specifically, the city of Duluth, MN encourages businesses and private residents to protect and revive the historical buildings within their community. The location of this building within the Downtown Waterfront District of Duluth allows for plenty of pedestrian traffic to experience the site on a daily basis and gives local residents more innovative, mixed-use spaces to occupy. In addition, this project works to revitalize a historic, but unkempt building and also creates more places to care for both the elderly and the young within Duluth. The value to society of a project typology like this results from the profound need for better accommodations for the elderly looking into the future. Our population is aging and within the next decade, the percentage of our population over the age of 65 is projected to double (Ortman, Welkoff, Hogan, 2014). With this growing need in our society, innovative design ideas are needed to create more positive and effective living environments for the elderly.

One of my main interests within the field of architecture lies with historic preservation and the adaptive reuse of historic buildings. There are so many opportunities to revitalize existing buildings into places that can be utilized for many years to come which adds to the history of the building and the city overall. This thesis illustrates my personal developments, knowledge, and abilities within the architectural field as it demonstrates my ability to successfully adaptively reuse a building. It also illustrates my flexibility in designing a new and innovative facility from something that has been standing for over a hundred years.

historical context



figure 49 | aerial lift bridge

Duluth

Originally settled by the Sioux and the Ojibway tribes, French explorers soon realized there were many fur-bearing animals in the area and took over the fur trade in the 1600's. A settler by the name Daniel Greysolon Sieur du Lhut tried to establish a trade agreement with the Native Americans in the area; he was unsuccessful, yet became the namesake for the city, du Lhut.

The early growth of the city was in part to do with two key factors; Lake Superior, and the railroad tracks. Easily accessible transit helped flood people to the area. After the government conducted a land survey in 1852 stating the area was rich with furs, timber, and iron ore, a land rush ensued. Duluth became one of the largest transportation hubs in the Midwest and the only U.S. port with access to both the Pacific and Atlantic Oceans.

The city took a downturn through the late 1900's as the steel market crashed and the U.S. Steel Duluth Works plant closed in 1981. Duluth struggled to cope with a population decline of almost 20 percent between 1960 and 1990. This decline in population resulted in an uncertain direction of growth and although Duluth has maintained its dependence on shipping, the local economy began to diversify in response to the decline (MN DOT 2010).

historical context



figure 50 | downtown duluth, 1960



figure 51 | aerial view

As industries left the city, they also left a plethora of abandoned, industrial buildings and warehouses. Duluth turned to tourism and the service industry as a way to revive its economy. In efforts to revitalize the city, many of these historical buildings have been restored and are now unique restaurants, entertainment venues, shops, and tourist locations. Duluth now strikes a successful economic balance between the industrial side and its current emphasis on the new Canal Park as a trendy tourism-oriented district (Duluth Chamber of Commerce, 2012).

historical context

Existing Site

Built in 1923, the St. Louis County Jail was designed by architects Abraham Holstead and William J. Sullivan. It is located across Second Street from the Civic Center main complex. Executed in a neoclassical style, the exterior consists of gray granite and terra cotta and rises four full stories. The fifth floor of the building was originally an open air courtyard, but was enclosed in 1978 to accommodate more office space.

In addition to this fifth floor renovation in the late 1970s, there was a single-story granite addition built onto the Southwest side of the Jail building in 1980 creating additional office spaces. Each floor of the building comprises about 5,600 square feet, plus an additional 5,600 square feet of the original basement, and the addition of the annex, about 2,500 square feet. In total, approximately 36,000 square feet.

This building held approximately 200 prisoners until 1995 until jail functions were moved to a new, larger facility outside of town. This jail building has remained mostly vacant ever since.

historical context

The details of the original building are impeccable and worthy of individually noting as well. The upper corners are highlighted by quoins and bays defined by small pilasters. They illustrate a sculptured shield of sorts, above which is an animal head. Closely spaced, ornate medallions support the cornice which in turn supports the projecting roofline. An inscription written in large letters occupies the frieze:

“The great privilege is given to all to develop strength of character, to lead clean and honest lives, to render diligent and worthy service, to help others, and to be loyal citizens of the republic and obedient to its laws.”

The southeastern facing façade is completely symmetrical in design with 16 enormous windows bringing in plenty of natural light on each side of the central three windows and inviting doorway. The main jail entrance is anchored by a short granite wall that encloses a small grassy area and granite pavers that lead to the doors. The southeastern façade allows the redesign to incorporate lots of natural light into residents’ rooms and communal areas, enhancing the overall spaces. The grassy area in front creates an opportunity for outdoor seating or dining for the residents, preschoolers, and community members visiting the coffee shop.



figure 53 | workers posing outside jail



figure 54 | exterior façade

historical context

The Historic Civic Center of Duluth is significant for its architectural and community planning links from Daniel Burnham's "City Beautiful Movement". Burnham was a pioneer of city planning and was one of the first architects to emphasize the relationship between buildings and their sites. His goal in developing the Civic Center was to provide Duluth with well-executed monuments that serve as buildings tied to the heart of the city. He chose the location for the Civic Center because of its proximity to both the railroad depots and the passenger ship docks at the waterfront. Burnham used a spacious promenade to link these buildings directly with the residents that regularly walk through downtown.



figure 55 | A postcard of Burnham's plan for the duluth civic center, 1909



figure 56 | duluth panorama, 1905

social + cultural context

While Duluth's economy has successfully been reliant on shipping and tourism for decades, they are always looking at ways to develop a stronger economy, more reliant on the locals that permanently reside in Duluth. There is a definite social trend across the United States of historic preservation and revitalization as people come to understand the inherent value of historic buildings in their cities. The economy is good and cities are always looking to better themselves and create more livable and engaging environments. Community engagement is vital to the success of a project because locals desire the best living environments possible. This is not a new way of thinking. The idea of historically preserving buildings and the essence of the city goes back hundreds of years in order to repurpose buildings and give them the opportunity to serve a community for another hundred years. What has changed is the sense of urgency that both residents and city leaders now have about creating unique and powerful environments for their residents to live in.



figure 57 | city overview + lift bridge

social + cultural context



figure 58 | st. louis county jail, 1925

History repeats itself. What was once a innovative, and energetic building in the center of the city of Duluth is now an abandoned jail. However this building can once again serve a purpose and give back to the surrounding community. Implementing independent living apartments and an Intergenerational Learning Center creates opportunities for more social engagement among the community and works to bridge generational and cultural differences among residents and other community members. In response to the analysis of the existing building conditions, the design exploration for this thesis must work to incorporate the architectural details indicated throughout the site.

The main goal driving the historical revitalization of the jail is to create a building that is not a renovation, but rather an adaptively reused place of value in Duluth's city center that can continue to be considered a historic architectural landmark.

site analysis qualitative aspects

Arriving in Duluth via Interstate Highway 35, the first thing I notice as I approach the downtown area is the seemingly endless Lake Superior. The proposed site for this design thesis is one of the most important aspect of the architectural process. Designing an Intergenerational Learning Center within an existing building, the historic St. Louis County Jail, creates a location that can establish new, impactful connections within the community. This thesis program caters to the people of the surrounding area, specifically to the users of the building, the preschoolers and elderly residents. By adaptively reusing this jail facility into independent living apartments, money and resources stay within the Downtown area of Duluth, which continues to develop the thriving economy and downtown environment. Rehabilitating this jail also helps enhance the presence of the Civic Center area by rehabilitating a vacant, unappealing building from the area.

The visual and sensory analysis made while visiting the site allows for better interpretations to be made and a more accurate program to be implemented. By understanding the location of the proposed site in relation to the rest of downtown Duluth, a more thorough and conscientious design approach can be made to allow for a successful redesign.



figure 59 | duluth skyline

qualitative aspects site analysis

With the building site adjoining the Civic Center, it provides a safe and inviting environment for the residents, local community, and preschool students at the Intergenerational Learning Center. The site allows for interactions to occur between the surrounding downtown area and the Civic Center. Architecturally, the rest of the buildings create a cohesive program involving the judicial system and government functions, but the implementation of mixed-use, independent living apartments and a preschool allow for the target market to expand and results in for more interactions with the rehabilitated site.

The value of this site can be illustrated by its original, defining typology and the efforts to restore the history, but also renovate and redesign with a new architectural building program. So much has changed since the jail was originally built in 1923 and was in service, and providing a new amenity to benefit the ever-changing community of Duluth, while also still preserving the rich history of the building is a challenging design exploration.

The existing site is full of texture and sensory materials that help highlight the character and architectural history from the 1920's. Overgrown vegetation surrounds you as you wander around the building site and the vibrant trees and vegetation behind the facility will create an inviting environment for preschoolers and the elderly alike to take advantage of and enjoy in a bustling, downtown environment.

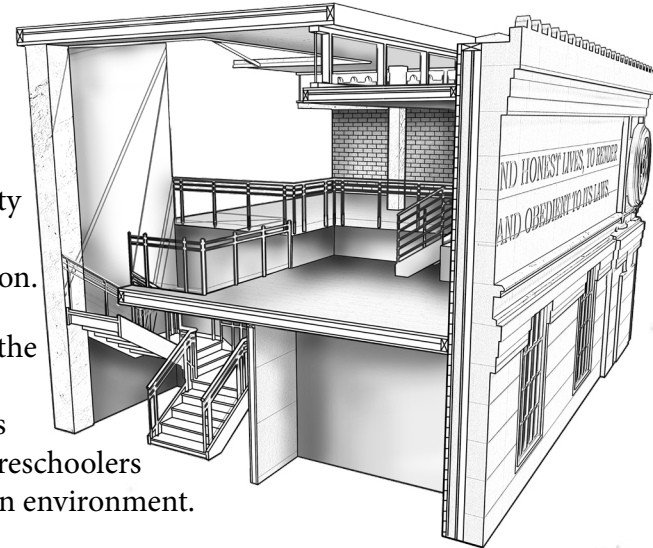


figure 60 | roofline section cut

site analysis qualitative aspects

existing grids



topography

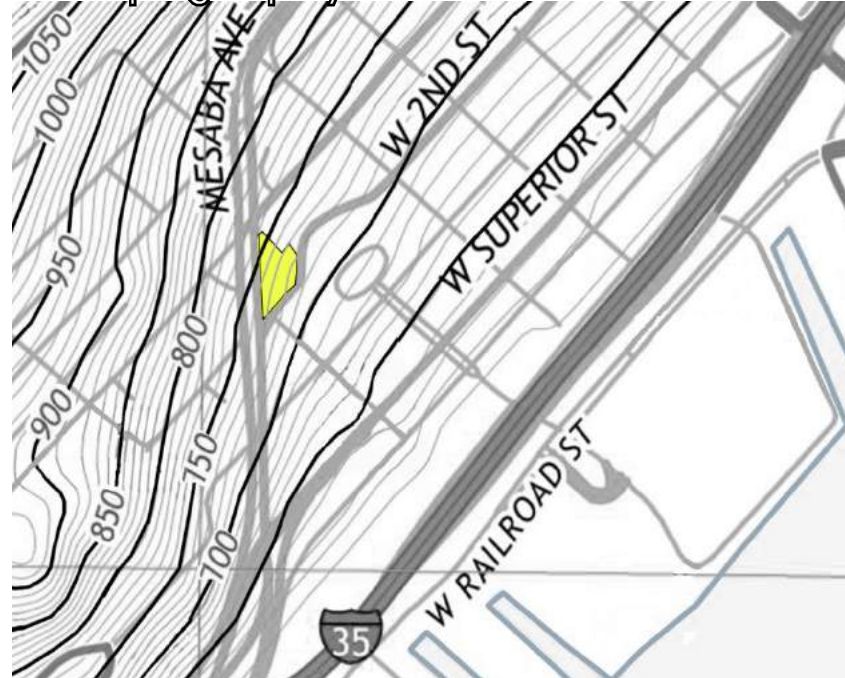


figure 61 | duluth grid and topographical lines

Light

An advantage the St. Louis County Jail facility has is its position on the hill the entire city of Duluth lies on. Because it is positioned higher, the new Intergenerational Learning Center will receive ample amounts of natural daylight throughout the entire day. The main facade of the existing building faces southeast which allows for excellent morning, midday, and afternoon lighting on all sides of the building.

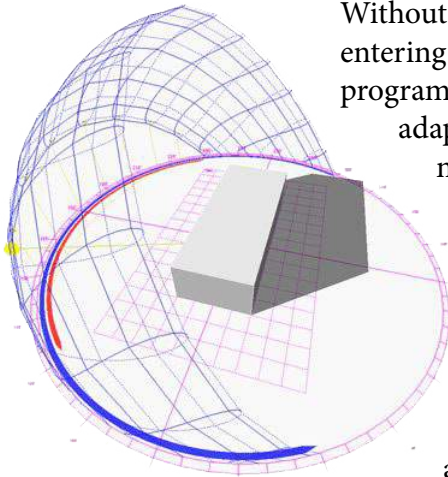


figure 62 | duluth sun study,
summer morning

Without a facade that faces true north, every resident enjoys natural lighting entering their apartment at some point during the day. While the former program called for minimal lighting and openings, one of the main goals of the adaptive reuse of this building is to rectify these issues and produce as much daylighting as possible. In addition, the harsh Duluth winters call for as much sunlight as possible as a small semblance of warmth.

The backyard of the building, where the playground and outdoor recreation area reside, does not receive great lighting during the morning or early afternoon as it sits northwest of the building. In order to attain maximum exposure to sunlight during the day, the site will be excavated and graded to create a larger outdoor area that sits further from the building; resulting in more sunlight.

site analysis qualitative aspects

Views

The views surrounding the site provide ample information in regards to the qualitative aspects of this thesis exploration. The proposed thesis site is surrounded by vegetation to the north and west, yet is also surrounded built features in a fast-paced, downtown environment to the east and south. Figure 63 captures the view one experiences as they exit the main doors of the adaptively reused building. Looking out at the County and Federal Courthouses and City Hall, and as you continue walking, Figure 64 illustrates the view looking out at the aerial lift bridge, Lake Superior and views of the neighboring Civic Center and downtown area.



figure 63 | view from entrance



figure 64 | view from front patio

qualitative aspects site analysis



figure 65 | original jail rooftop view



figure 66 | annex rooftop view

The captivating views from the roofs of the St. Louis County Jail provides an interesting opportunity to integrate another outdoor destination.

Unfortunately, due to regulations regarding the building's place on the National Register of Historic Places in Duluth, any sort of function of the rooftop of the original building is not an option. However in the new Intergenerational Learning Center addition, highlighting the views with large curtain windows from the second story preschool allows students to enjoy those beautiful views.

site analysis qualitative aspects

While there is no visible water on the site, Lake Superior is a huge influence on the site, as well as the city of Duluth. The lake also greatly impacts wind levels on the proposed thesis site and throughout downtown.

The surrounding buildings, tree protection to the north side of the site, and retaining wall to the northwest of the building all help mitigate winds affecting the users of the Intergenerational Learning Center. The front patios are blocked from northwestern winter winds, but will be exposed to the lake and winds from the south. Average wind speeds in Duluth fluctuate between 9-12 miles per hour, and are slightly higher than the national average, about a 2 mph difference because of Lake Superior.

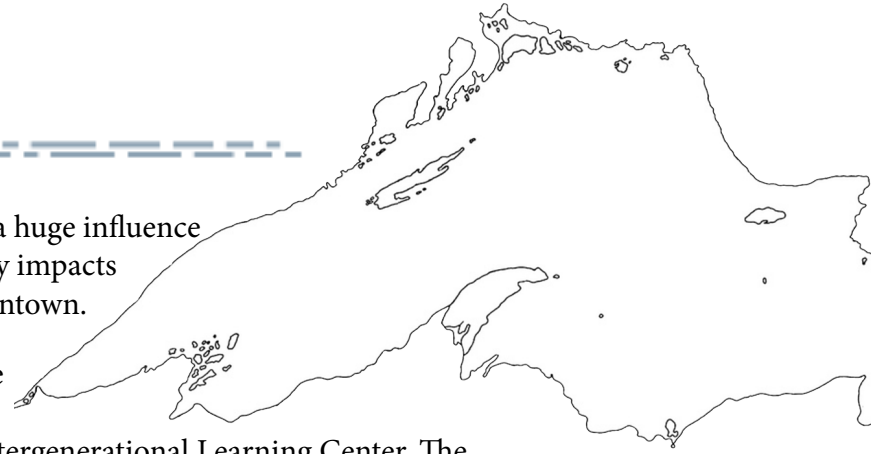


figure 67 | lake superior

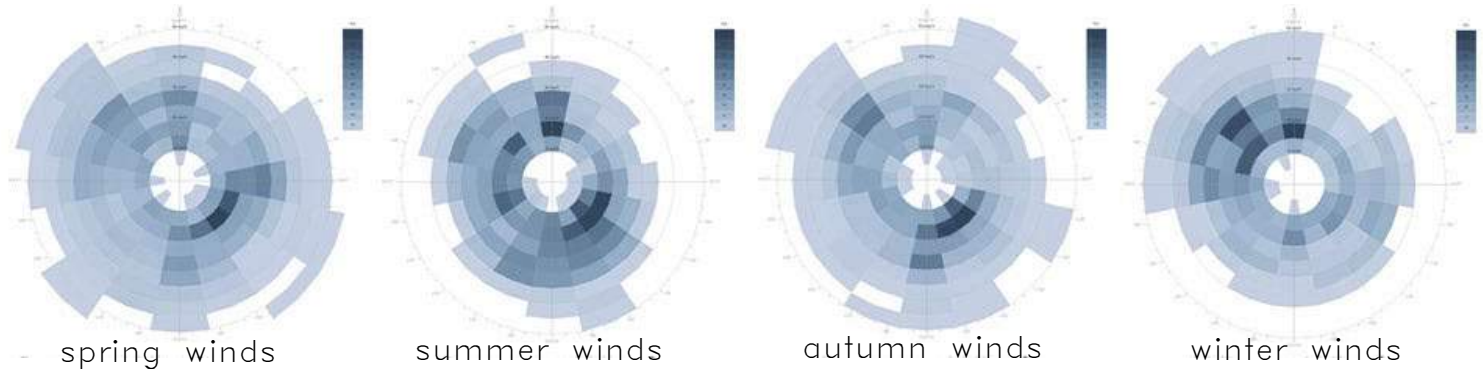


figure 68 | wind roses, duluth

Revitalized Site



figure 69 | proposed backyard

Existing Vegetation



figure 70



figure 71



figure 72



figure 73



figure 74



figure 75

site analysis qualitative aspects

human characteristics + distress

As I sat documenting the proposed site, I noticed how almost everyone walking or driving passed by without experiencing or even noticing the rich architecture of the building. The only people who paid any attention to the historic jail were the ones who glanced at me first, and then looked to see what I was sketching.

There is a considerable amount of pedestrian and driving traffic in this area. The main issue surrounding the walkability of this site is that its location results in community members just passing by. While it is surrounded by daily human activity, there is nothing near this site drawing people in to experience the facility. One of the main goals in the redevelopment of the St. Louis County Jail is to get locals wanted to stop and enjoy this mixed-use facility.

This area of Duluth is highly industrialized, with little left untouched by urban development. Distress on the site is demonstrated by the current dilapidated nature of the building and the urban decay of some surrounding buildings. The paved surfaces and sidewalks surrounding the site are overall in poor condition.

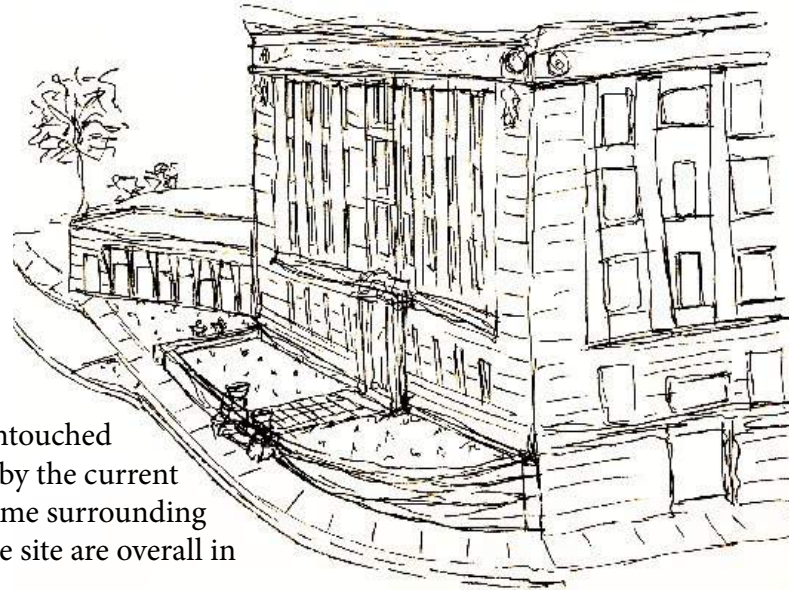


figure 76 | building sketch

average annual temperature

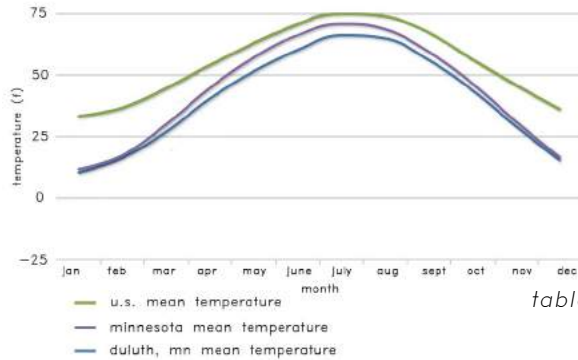


table 1

average annual precipitation

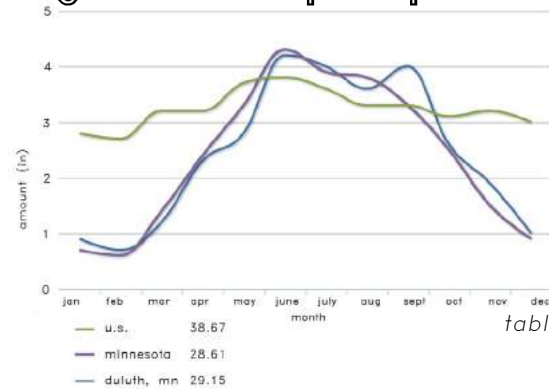


table 2

average annual humidity

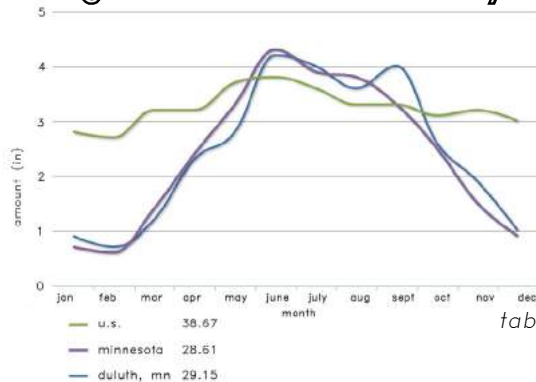


table 3

average annual snowfall

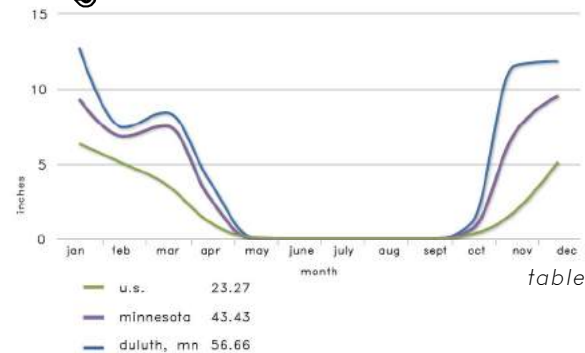


table 4

site analysis quantitative aspects

soil types

The soil within Duluth consists of various types throughout the city. It ranges from direct bedrock to deep soils in flat areas. The proposed thesis site consists of two different soil categories. The first is “Rock outcrop-Mesaba-Barto complex”, F160F, a lithic bedrock and has a slope between 18 and 60 percent. This soil mostly consists of a sandy red clay that is prone to erosion, which also results in a well-drained region.

The second soil type present near my building is “Urban land-Mesaba-Rock outcrop complex”, F163D, with gravel, fill materials and blasted bedrock in order to create a flatter surface. This soil’s average slope is a 1 to 18 percent slope. This soil is a mixture that is also susceptible to erosion and any steeper slopes are quite short in length.

quantitative aspects site analysis

duluth public transit

Accessibility is a huge advantage to this downtown site as well. The historic jail is located in close proximity to public transportation routes and within walking distance to Canal Park and local shops in the area. Not only do downtown renovations and restoration create more jobs and opportunities for people to work right in the city, but it also allows more people, specifically the elderly in this building, to live in the downtown area. In effect, this project will help create a more sustainable urban environment for the city.



figure 77 | west second street



figure 78 | mesaba avenue

figure 79 | public transit

site analysis quantitative aspects

legend







-  main views
-  wind patterns
-  primary vehicle circulation
-  secondary vehicle circulation
-  major intersections
-  pedestrian circulation
- 4,350** vehicular traffic per day



figure 80 | site analysis

quantitative aspects site analysis

The city has a total area of about 87.5 square miles, almost 20 of which is water. Duluth's topography is dominated by a steep hill that climbs from Lake Superior inland.

figure 81 | 3D site

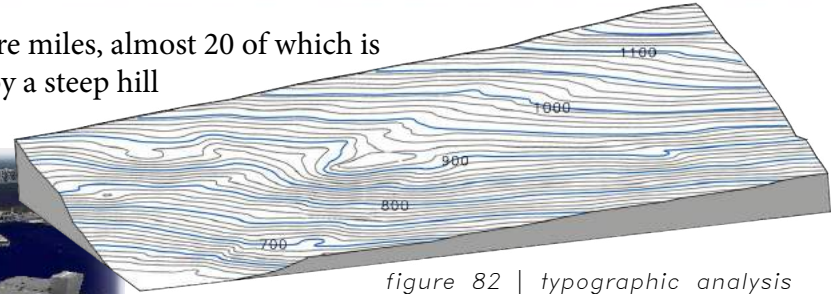
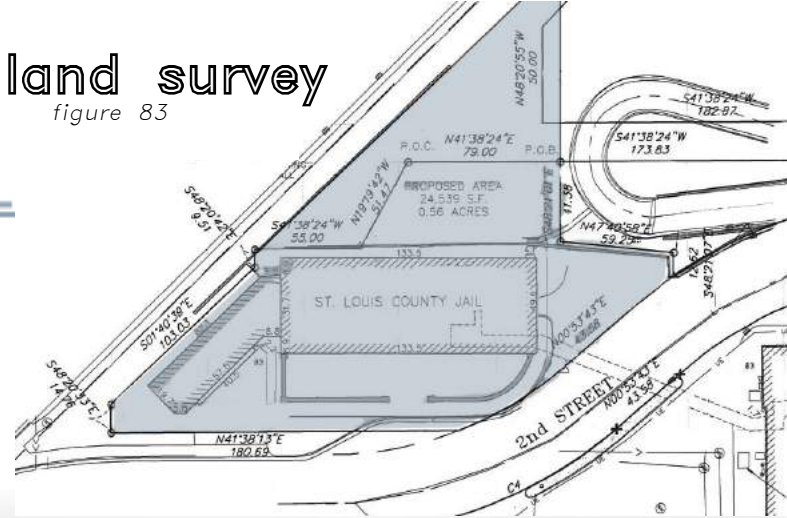


figure 82 | topographic analysis

The proposed thesis site lies between 720-750 feet above sea level. 60 percent of the front half of the site has a slope of less than 15 percent, the rest of the site has a larger slope, between 18-60 percent. Since a building already resides on the proposed site, the proper tests have already been conducted to prove that the existing building is structurally sound and the soil and terrain it lies on is sufficient for further site development.

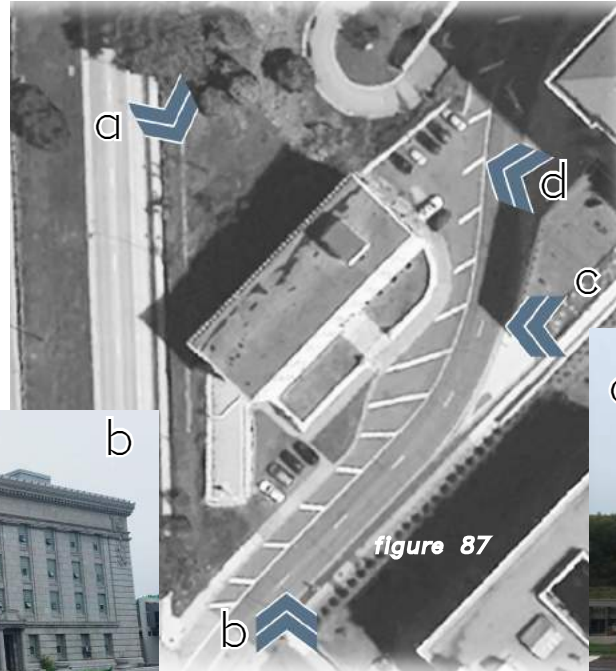
site analysis quantitative aspects

land survey
figure 83



quantitative aspects site analysis

site reconnaissance



programmatic requirements

Senior Living

| | |
|---------------------------|---------------------------------|
| Apartment Units | 30 @ 400-600 sf each; 14,000 sf |
| Exercise and Therapy Room | 1,930 sf |
| Resident Storage | 1,400 sf |
| Laundry | 325 sf |
| Communal Gathering Spaces | 3,220 sf |
| Dining Kitchen area | 750 sf |
| | <hr/> 21,625 net sf |

Preschool

| | |
|------------|--------------------|
| Classrooms | 2,140 sf |
| Offices | 390 sf |
| | <hr/> 2,530 net sf |

Public Spaces

| | | |
|-----------------------------------|--------------------|--------------------------|
| Intergenerational Learning Center | 2,870 sf | |
| Exterior Recreation Playground | 13,000 sf | |
| Service and Loading Provision | 500 sf | |
| Coffee Bar Dining | 1,660 sf | |
| Front Porch | 3,060 sf | ~16,060 sf outdoor space |
| | <hr/> 5,030 net sf | |

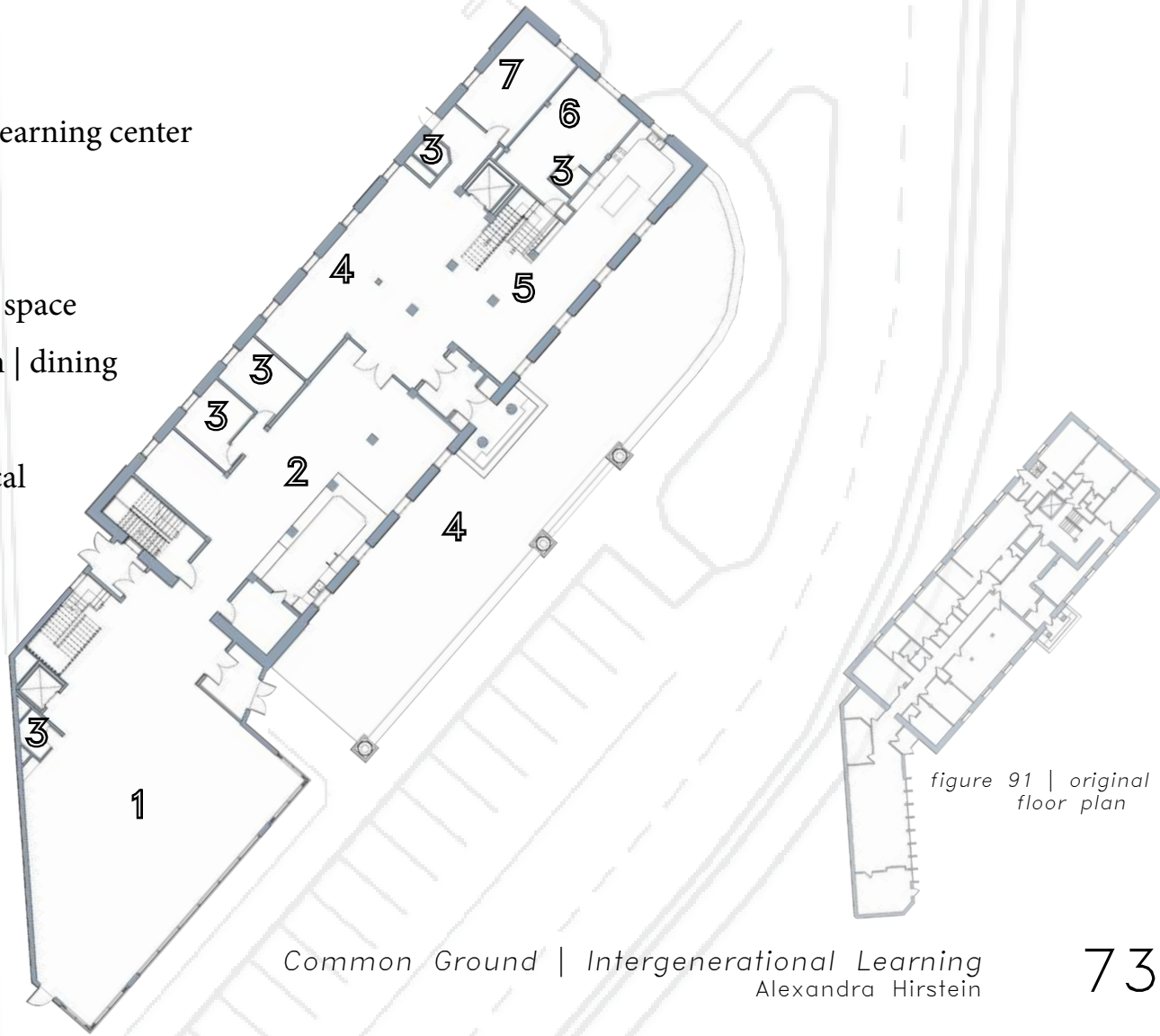
Grossing Up Factors

29,185 net sf

Gross Building Total

| | |
|---|-----------------------|
| Mechanical | 2,000 net sf |
| Circulation, egress, custodial, toilets | 4,300 net sf |
| | <hr/> 35,485 gross sf |

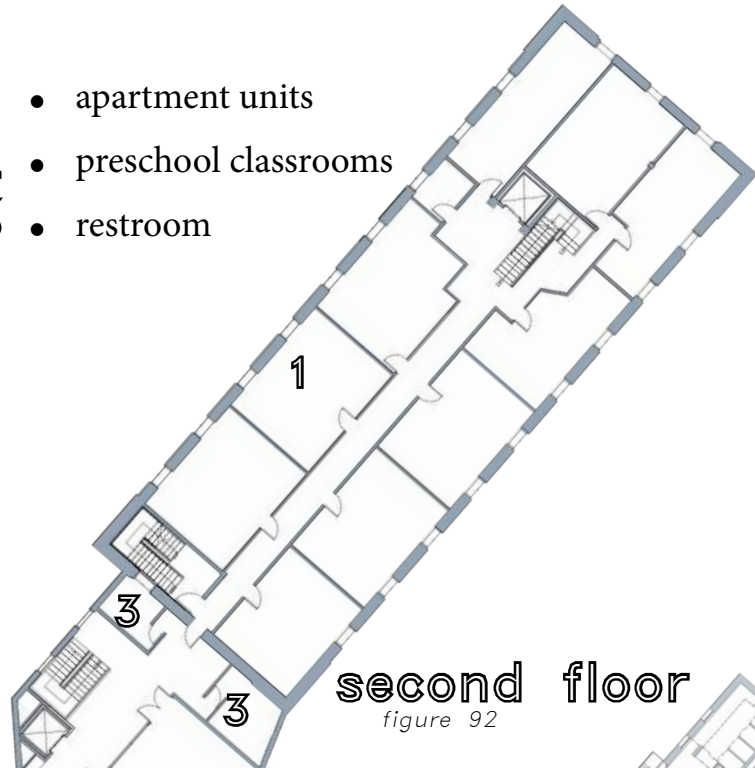
- 1 • intergenerational learning center
- 2 • coffee bar
- 3 • restroom
- 4 • resident gathering space
- 5 • communal kitchen | dining
- 6 • offices
- 7 • storage | mechanical



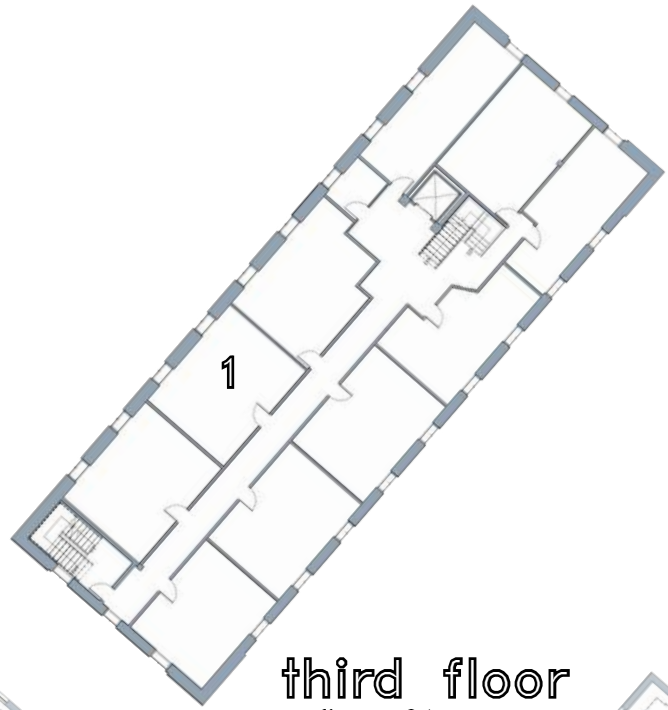
ground floor
figure 90

figure 91 | original floor plan

- 1 • apartment units
- 2 • preschool classrooms
- 3 • restroom



second floor
figure 92



third floor
figure 94

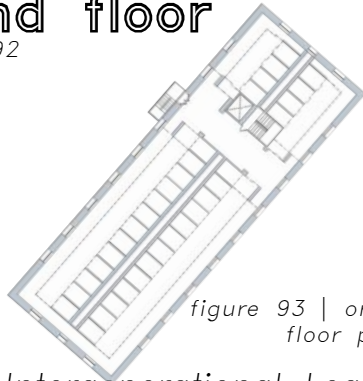


figure 93 | original floor plan

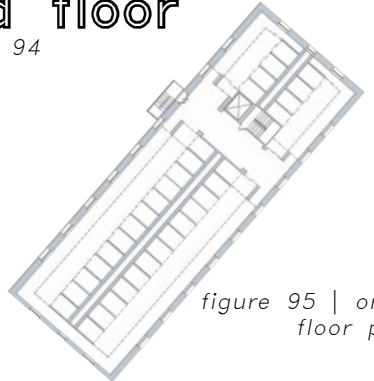
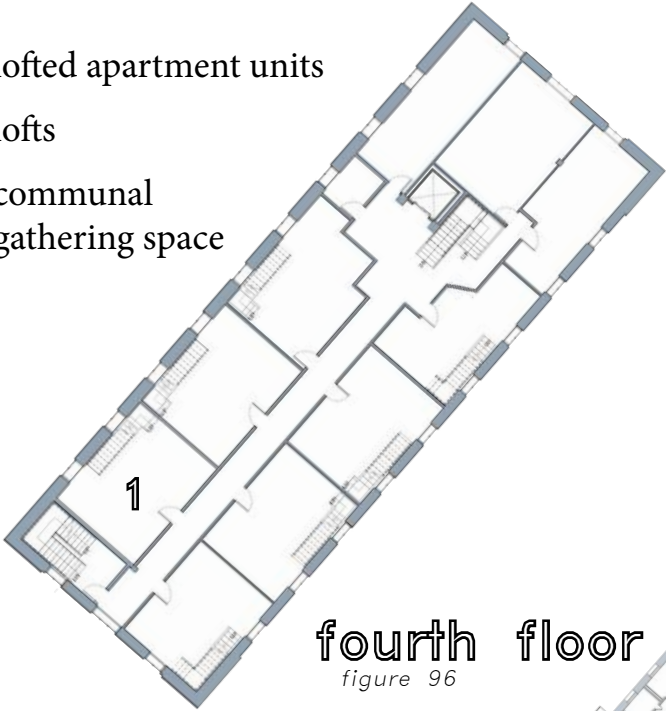


figure 95 | original floor plan

- 1 • lofted apartment units
- 2 • lofts
- 3 • communal gathering space



fourth floor
figure 96



fifth floor
figure 98

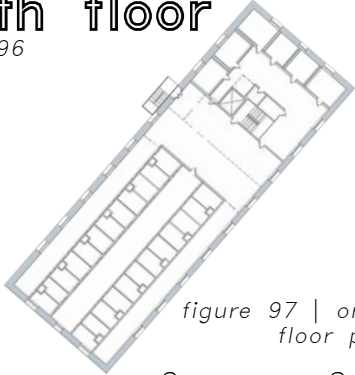


figure 97 | original floor plan

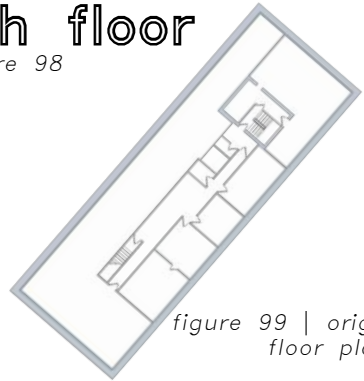


figure 99 | original floor plan

- 1 • individual resident storage
- 2 • exercise | therapy room
- 3 • restrooms
- 4 • laundry facilities
- 5 • service provisions
- 6 • mechanical



basement
figure 100

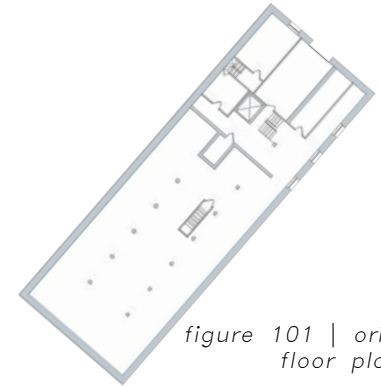


figure 101 | original floor plan



figure 102 | exercise room

Creating spatial vitality by transforming static, old spaces into dynamic, spirited living environments.



figure 103 | typical living environment



figure 104 | lofted living environment

programmatic elements



figure 105 | building entrance

Common Ground | Intergenerational Learning
Alexandra Hirstein

programmatic elements



figure 106 | exterior driving perspective

Common Ground | Intergenerational Learning
Alexandra Hirstein

programmatic elements

Rehabilitating the historic St. Louis County Jail to accommodate a mix of independent elderly living apartments, learning spaces for preschoolers, and Intergenerational living and learning spaces will help revitalize the downtown Duluth area and create a space no longer reminiscent of its harrowing past.



figure 107 | southeast elevation

goals for thesis

Academic

This thesis exploration has allowed me to grow in my abilities as an academic research student and designer. By applying things that I learned in previous years, I hope to grow in my decision-making abilities and my ability to give tangible substance to my research discoveries about the aging process. This project draws on my continuous efforts within studio classes for sustainability and livability within project designs as well as my passion for historic preservation and adaptive reuse.

Professional

The thesis process will provide a catalyst to help build confidence in my capability to contribute in a professional setting; particularly in terms of sustainable design, adaptive use of historic buildings, and effective project management. I look forward to contributing as part of a design team to creating residential living environments that enrich the quality of life of building users and help continue to see the beauty in existing infrastructure.

Personal

I hope to grow in my abilities and commitment to make timely, well-supported design decisions and continue to be inspired by historic buildings and the many sustainable alternatives available in this field. I intend to pace my efforts to define an architectural program to enable much more specific, detail development of design ideas, leading to a unified, meaningful design solution.

plan for proceeding

Research Direction

A main design direction of this thesis is establishing a positive relationship and striking a balance between the needs of modern architecture and a historic building. A comprehensive understanding of the many aspects and requirements of historic preservation and adaptive reuse is essential for this project. Further research must be conducted on senior living and what elderly residents require for this to evolve into a successful building design. Researching the site and its potential expansion and uses is essential to allow for stimulating and engaging environments for the residents.

Design Methodology

The design methodology chosen for this thesis is a mixed method with equal qualitative and quantitative data compilation and analysis. Extensive research and analysis of the site will include interaction and direct observation of the site, interviews with locals, and communication with the city of Duluth and the adjoining buildings. Statistical data is also vital to the success of this thesis design as senior care should improve upon the revitalization of the historic St. Louis County Jail site. This methodology is ideal because it allows engagement with the local community and culture before approaching this architectural exploration.

plan for proceeding

Documentation of Design

As the final design will explore the relationship between revitalization of a historic building and the implementation of an Intergenerational Learning Center, it is imperative that all components of the design and process are meticulously documented. The final thesis book will clearly define the relationship between the historic building and its new and spirited program. This thesis design will also be preserved digitally as a part of the NDSU Institutional Repository as well as documented on my personal computer for future accessibility.



figure 108 | site perspective

thesis design schedule

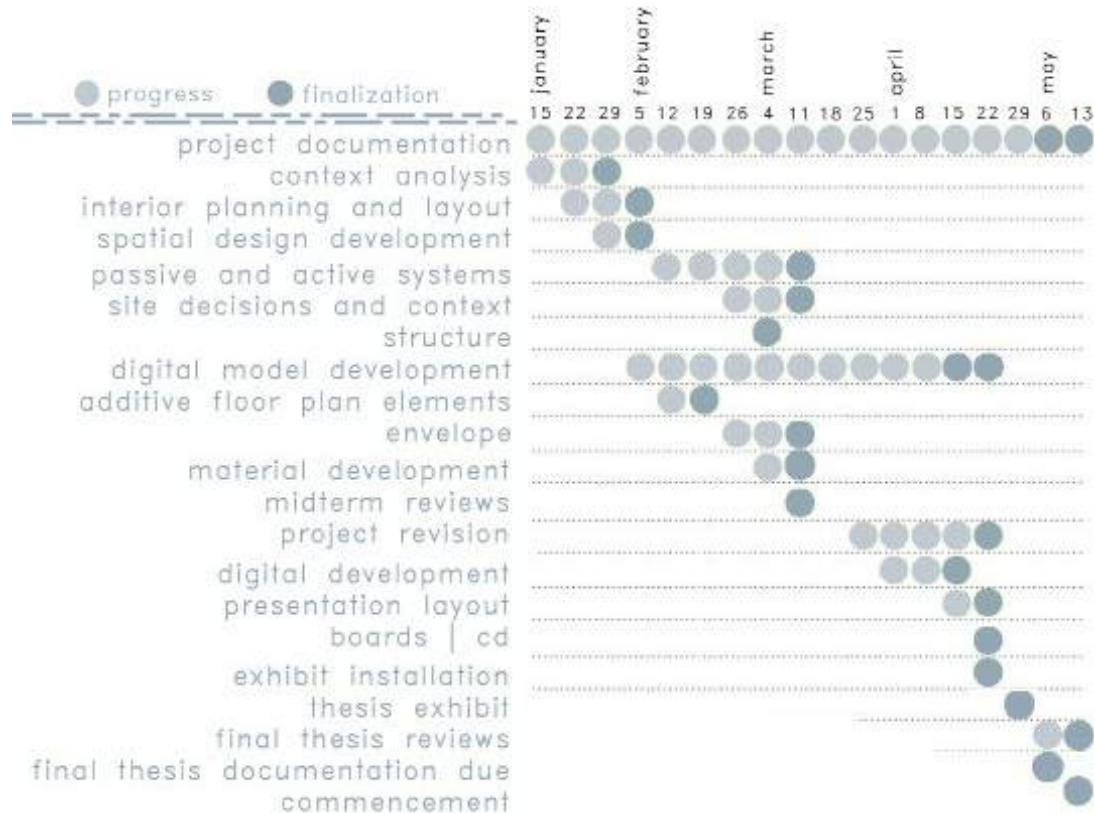


table 5

previous studio experience

Second Year

Fall 2012 : Stephen Wischer

Tea House | Fargo, ND | Designing a conceptual building

Minneapolis Boat House | Minneapolis, MN | Seasonal impact on architecture

Spring 2013 : Phil Stahl

Dance Studio | Moorhead, MN | Incorporating a parti as design inspiration

Unconventional Dwelling | Munich, Germany | Sustainability and design on a micro scale

Third Year

Fall 2013 : Paul Gleye

Adaptive reuse, Moorhead Revitalization | Moorhead, MN

Mixed-used Restaurant Revitalization | Moorhead, MN

Streetscape Redesign | Moorhead, MN

Spring 2014 : Bakr Aly Ahmed

NDSU Culinary Arts School | Fargo, ND | Urban Infill

International Border Crossing Station | Grimaldi, Italy | ASCA Steel Design Competition

Fourth Year

Fall 2014 : David Crutchfield

High Rise | San Francisco, CA | Extensive research and collaboration within a partnership

Spring 2015 : Steve Martens

Adaptive Reuse of Woodrow Wilson School | Fargo, ND | Integrating new architectural features
into a historic building

Fifth Year

Fall 2015 : Mark Barnhouse

Water Research Facility | Hawley, MN | Designing without affecting the natural environment

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literary review

An Aging Nation: The Older Population in the United States

This report, conducted by Jennifer M. Ortman, Victoria A. Velkoff, and Howard Hogan, examines how the the age structure of the population of the United States is expected to change over the upcoming decades. It also focuses on the older population in regards to age, race, sex, and origin. Conducted in 2014, they hoped to make concrete estimates and projections on the growth of the elderly population.

By 2050, the United States will experience considerable growth, both economically and socially, and the population is expected to be almost double the 2012 population of 43.1 million, nearly 83.7 million. The aging of our country's population will have many implications on our society. Mortality projections are ever-changing, but are considerably getting older as the elderly live longer. Creating positive, inviting environments for senior citizens to live in is becoming a growing problem as older adults want to remain a part of their communities and have a positive impact on their surroundings.

This source was incredibly influential to my thesis design proposal. Reliable estimates and projections allow for sound evidence behind the proposed program to be implemented into the historic St. Louis County Jail in Duluth, MN, an Intergenerational Learning Center.

literary review

Architectural Voices: Listening to Old Buildings

If a building could speak, what would it say? And would it be worth listening to? David Littlefield and Saskia Lewis argue in this 2007 book that buildings all have voices and yes, it is worth listening to what they have to share. This book examines how buildings guide architecture, with a focus on elderly structures because they are constantly being reinvented. The authors discuss over twenty historic buildings; cathedrals, brothels, homes, etc., and share the interviews with the architects and residents responsible for the renewal of the buildings. They demonstrate that there are qualities of the places that we inhabit that are not only architectural style. Listening to these “architectural voices” allows for a better understanding of old buildings and the history found between their walls.

This novel treats buildings on a more human scale and creates a conversation about how the buildings can influence their users. *Architectural Voices* greatly influenced the design and adaptive reuse of the historic jail. Duluth, Minnesota has a rich history, from the first settlers in the 1600’s to the 1920’s when this facility was built, to today. The history one finds within the walls of the St. Louis County Jail is insurmountable and will continue to influence the future users of the facility. While my original goal was to try to make users forget the previous program of the building, after researching and reading about the benefits to letting the old buildings speak, a decision was made to honor the history and the prisoners that once resided in the building. While my goal to socially reposition the building is still a foremost priority, creating ways within the building to remember the past could also play an important role in the Intergenerational Learning Center.

literary review

What Social Relationships Can do for Health American Society on Aging

The ever-growing number of people labeled with dementia, social isolation, and other mental illnesses has created many social challenges regarding the aging population. Sara Qualls discusses new innovative approaches that must be uncovered in order to address the growing number of social challenges associated with these considerable changes in population demographics. Cognitive aging is considered more than just the loss of certain abilities, and shaping elderly homes and independent living facilities around the importance of social interactions.

The influence this scholarly article had on my research is substantial. When deciding to design and implement an Intergenerational Learning Center into the historic St. Louis County jail, finding ways to creating appealing and livable environments for the elderly was imperative. While there are ways to implement successful independent living facilities on their own, my decision to incorporate a preschool and places for these groups to congregate was heavily influenced by the extensive research, like Sara Qualls' article, regarding the growing problem in elderly care facilities and social isolation.

identification



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For the strength of the herd is the bison
and the strength of the bison is the herd