



MAIN STREET VISUAL &  
PERFORMING ARTS CENTER

*Bringing people together to celebrate fine art...*

JENNIFER A. WATTERS

# MAIN STREET VISUAL & PERFORMING ARTS CENTER

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

By  
Jennifer A. Watters

In Partial Fulfillment of the Requirements for the  
Degree of Master of Architecture



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Primary Thesis Advisor



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Thesis Committee Chair

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Fargo, North Dakota

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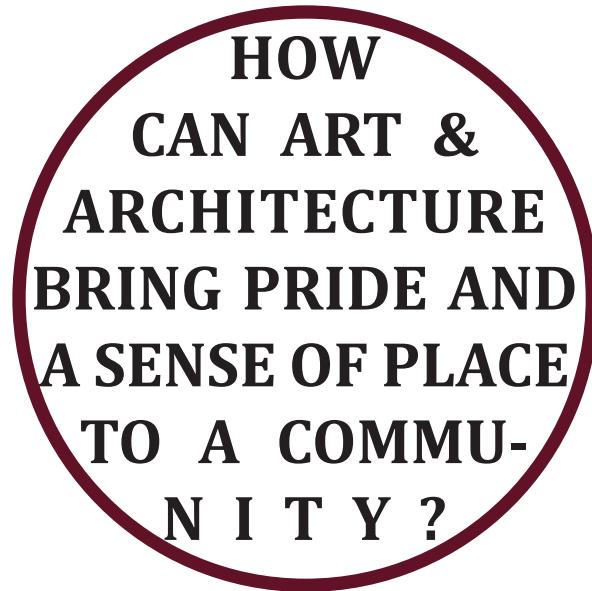
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## **ABSTRACT**

THE TOWN OF NORTH BRANCH, MINNESOTA LACKS A SENSE OF PLACE AND COMMUNITY PRIDE. THE SCHOOL DISTRICT HAS BEEN FORCED TO CUT MANY FINE ARTS PROGRAMS IN THE PAST TEN YEARS AND THE ONLY ART CULTURE IN THE CITY EXISTS IN THE SCHOOLS AND BEHIND CLOSED DOORS. WITH A PRIMARILY MIDDLE- TO LOW-CLASS POPULATION, RESIDENTS HAVE NO INTEREST IN IMPROVING THE COMMUNITY OR SUPPORTING THE ARTS, IF IT WILL COST THEM. MY SOLUTION TO THE ISSUES IN THE COMMUNITY IS A SUSTAINABLE CENTER OF VISUAL AND PERFORMING ARTS. THE FACILITY WILL ALLOW RESIDENTS TO ATTEND PERFORMANCES, VIEW LOCAL ART, AND PARTICIPATE IN THE CREATION OF ART. THE BUILDING WILL ASPIRE TO BE A NET ZERO ENERGY FACILITY TO MINIMIZE OPERATIONAL COSTS. THE COMBINATION OF VISUAL ARTS, PERFORMING ARTS AND SUSTAINABLE ARCHITECTURE WILL BRING THE COMMUNITY TOGETHER IN A FACILITY THEY CAN TAKE PRIDE IN.



**HOW  
CAN ART &  
ARCHITECTURE  
BRING PRIDE AND  
A SENSE OF PLACE  
TO A COMMU-  
NITY?**

•◦●○PROPOSAL○●◦•

## THEORETICAL ASPECT

### CLAIM:

The community of North Branch, Minnesota lacks a suitable fine arts culture. There are no gathering places for locals to share their creations. The school district is unable to provide a quality fine arts education due to lack of funding. The financial hardships of the town have left residents with nothing in the community to be proud of. North Branch needs a focal point that will bring people together and restore the sense of pride in the community.

### PREMISES:

- ① A visual and performing arts center will give students an education in the arts that the school is unable to provide.
- ② A visual and performing arts center will provide the community the chance to create art that can be shared with the whole community.
- ③ The architecture can provide a new focal point and gathering space for the community.
- ④ The sustainable architecture will provide the community with a high quality facility with little financial burden.
- ⑤ A LEED Platinum certified arts center will bring a sense of pride to the community.

### FINAL PREMISE:

The integration of art, architecture, and sustainability can provide supplemental fine arts education, a sense of place, and community pride without a long term financial burden.

## NARRATIVE

The town of North Branch, Minnesota is missing a sense of place and pride within the community. No one is overly proud to be from North Branch, Minnesota, especially young people. The past eight levies for the school district have failed. With the amount of public assistance income at 64% over the national average, residents are simply unable to help pay for education (USACityFacts.com, 2013). The school district has been faced with upwards of \$17 million in budgets cuts since 2003 (Kytönen, 2013). The school was forced to cut faculty and almost all nonessential programs, resulting in less opportunities for students in the fine arts. One effort to reduce the school district's cost was to demolish the old Main Street School because it was deemed unsafe and the district couldn't afford to fix it, which saved the district \$400,000 per year (Kytönen, 2013). The site of the old Main Street School has been empty ever since.

I went to North Branch Area Schools for all 13 years of schooling and I was personally affected by those budget cuts. Every year another extra-curricular activity was cut that I never had the opportunity to participate in. My favorite extra-curricular activity was cut the year after I graduated high school. Without these activities students are missing out on many very valuable learning experiences. The arts don't simply teach people how to use paint or how to sing, they teach students lessons that extend far into their future careers, like leadership, teamwork, and determination. The creation of art also gives the artist a sense of pride and the viewing or performance of the art brings the community together.

## NARRATIVE | CONTINUED

One of the best things about fine art education is the teachers. In an art class, students are treated very differently than they are in a core education class. The teachers are artists themselves and the relationship between the student and teacher comes closer to friendship. Art teachers are able to get to know students at a deeper level because the artwork is an expression of the student who created it. Sometimes students are only able to express their hardships through their artwork. Since art is such a personal thing, art teachers are able to ask the questions that no one else will and help the students through whatever problems they may be having at home or otherwise.

My thesis aims to solve the issues in the community of North Branch, Minnesota by providing a place for people to create art and share it with each other. The sustainable visual and performing art center will become a focal point in the community with the high quality architecture. The building will aim to be net zero energy to minimize operating costs. The LEED certification will add to the community pride in the new building. I think that the combination of art and architecture can restore a sense of place and community pride in North Branch.



**PROJECT TYPOLOGY | TYPOLOGICAL PRECEDENTS**

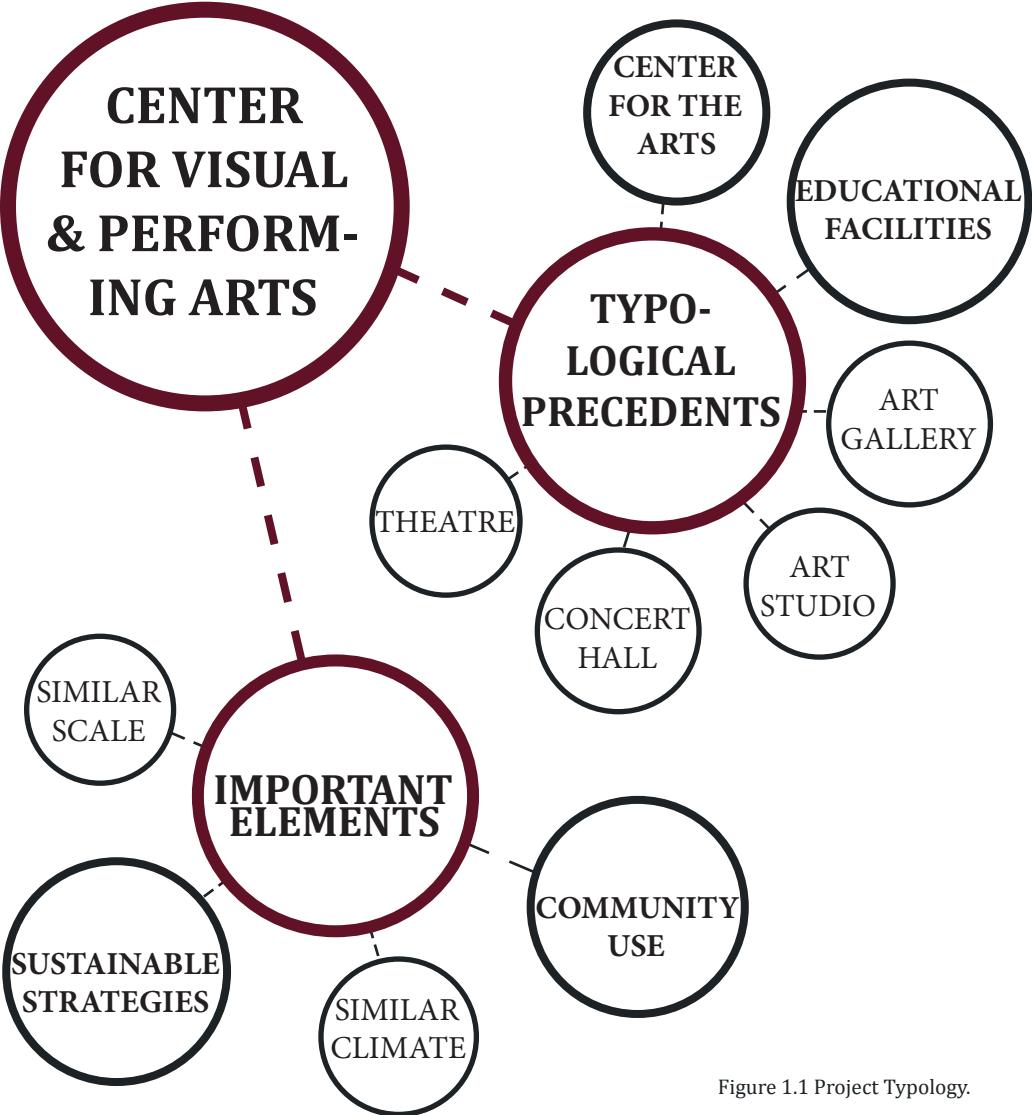


Figure 1.1 Project Typology.

**TYPOTOLOGICAL RESEARCH**

**CASE STUDIES**

- ① High School #9 for the Visual and Performing Arts  
Central Los Angeles, CA
- ② Reva and David Logan Center for the Arts  
University of Chicago, IL
- ③ Walker Art Center  
Minneapolis, MN

**SPECIAL CASES**

- ① The Stream, a Visual and Theatre Arts Center  
Edgewood College, Madison, WI
- ② Rhodes Center for the Arts  
Northfield Mount Hermon, MA

**OTHER CASE STUDIES TO CONSIDER**

Uptown Performance and Visual Arts Campus  
Booker T. Washington High School for Performing & Visual Arts

**SIMILARITIES TO MY PROJECT**

	①	②	③	①	②
PROJECT ELEMENTS	●	●	○	●	●
MIDWEST REGION	○	●	●	●	○
SUSTAINABILITY	○	○	○	●	●
COMMUNITY INVOLVEMENT	●	●	●	●	●
SIMILAR IN SCALE	○	○	○	●	●
COST EFFECTIVE	○	○	●	●	●
LANDMARK	●	○	●	○	○

Figure 1.2 Project Similarities.

# CASE STUDY #1 | HIGH SCHOOL #9 FOR THE ARTS

## INTRODUCTION & FINDINGS

### PROJECT TYPE:

High School for the Arts

### ARCHITECT:

COOP HIMMELB(L)AU

### LOCATION:

Los Angeles, CA

### SIZE:

230,000 Square Feet

### MATERIALS:

Metal panels, oddly shaped windows, metal structure

### CHARACTERISTICS:

The building certainly draws the eye due to the spiral and cantilever. The shiny metal cladding and windows make the building seem new and high tech.

### PROGRAM ELEMENTS:

- |              |             |                  |
|--------------|-------------|------------------|
| Art Studios  | Music Rooms | Blackbox Theater |
| Dance Spaces | Cafeteria   | Stage            |
| Library      | Theater     | Service Space    |
| Gymnasium    | Lobby       | Courtyard        |

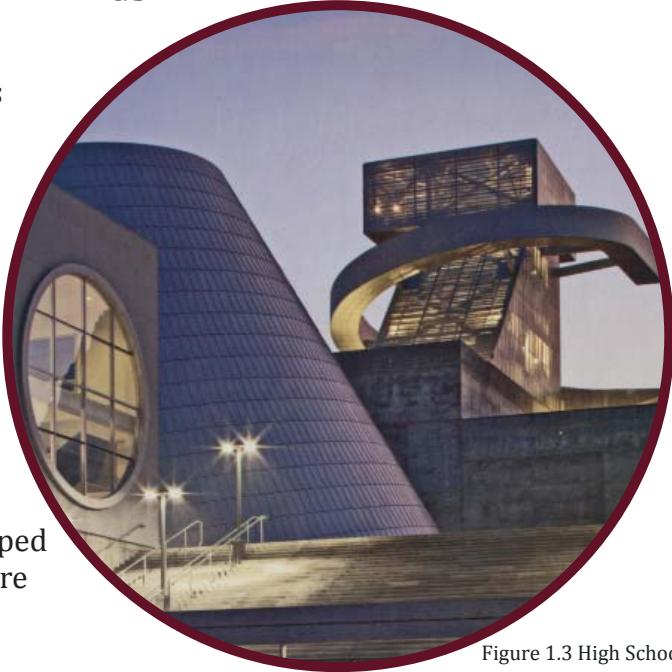


Figure 1.3 High School #9.



Figure 1.4 High School #9.



Figure 1.5 High School #9.



Figure 1.6 High School #9.

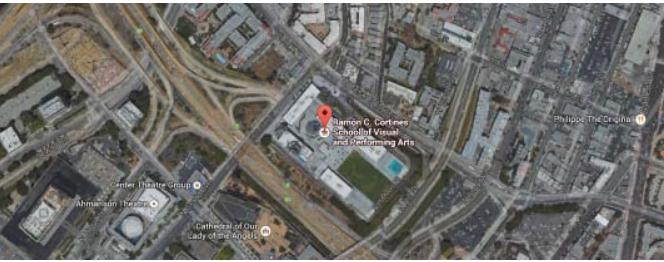


Figure 1.7 High School #9 Site.

### SITE RESPONSE:

The building responds to the site in the way it draws people's attention from all of the transportation happening around it. The building is an icon and has views of the rest of the city. The amount of green space on the site is less than satisfactory.

### UNDERPINNINGS:

Through my research, I did not find many examples of underpinnings. The school was designed to house music, dance, theatre, and art. The architecture focuses strongly on the aesthetics. The building is not necessarily very functional.

# CASE STUDY #1 | HIGH SCHOOL #9 FOR THE ARTS

## ANALYSIS & CONCLUSION

### MASSING:

The mass of this case is unique because it emphasizes the theater.

### GEOMETRY:

The geometry is complex with different shapes and heights of spaces.

### HIERARCHY:

The hierarchy is shown with different colors in the diagram.

### NATURAL LIGHT:

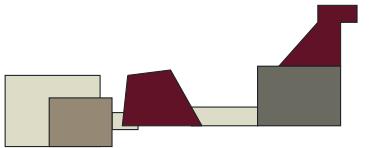
Daylight enters from the North for optimum ambient light.

### PLAN TO SECTION:

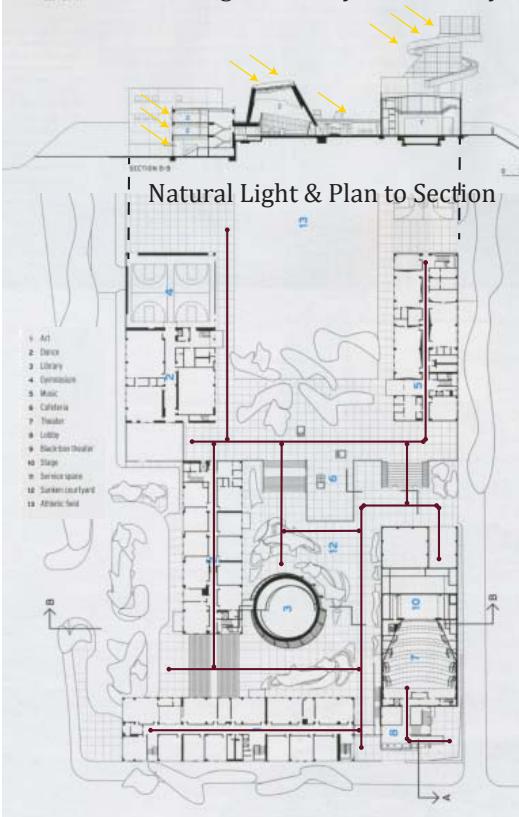
The plan is unable to convey the different heights of the building.

### CIRCULATION:

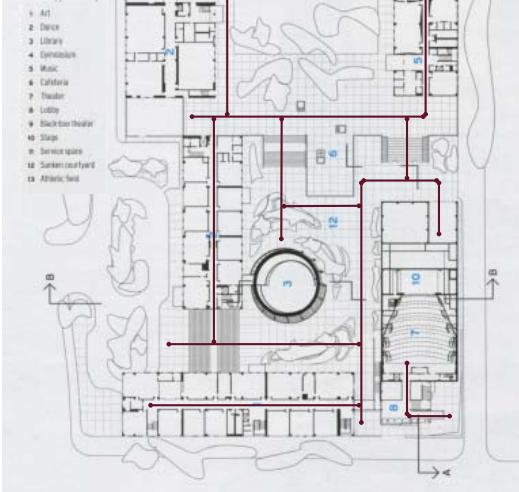
Circulation is mapped on the plan. The building is centered around the library.



Massing, Geometry, & Hierarchy



Natural Light & Plan to Section



Circulation & Section to Plan

Figure 1.8 Case Study 1 Analysis.



Figure 1.9 High School #9.

### WHAT DOES CASE SHOW?

This case shows that the function of the building is as important as the form. Students are not overly pleased with the spatial organization and the school is very unhappy about the outrageous price. The building cost \$1,000 per square foot. The iconic architecture is one positive thing about this case.

### CONTRIBUTION TO THEORETICAL PREMISE:

This case shows that architecture can draw people in and create a sense of place for the community. It shows that function is a very important consideration in design.

### DID THE THEORETICAL PREMISE CHANGE?

The theoretical premise did not change. This case taught me that aesthetically pleasing architecture should not be the most important part of the design.

# CASE STUDY #2 | U OF CHICAGO: CENTER FOR THE ARTS

## INTRODUCTION & FINDINGS

### PROJECT TYPE:

Art Center

### ARCHITECT:

Tod Williams Billie Tsien

### LOCATION:

Chicago, IL

### SIZE:

184,000 Square Feet

### MATERIALS:

Golden limestone, metal roofing & curtain wall glazing

### CHARACTERISTICS:

The building has a great deal of contrast with the tower and lower sections. Clerestory windows are prominent on the lower roof. A cantilever emphasizes the entrance.

### PROGRAM ELEMENTS:

Auditorium	Dressing Rooms	Mechanical
Theater Lobby	Music Practice Rooms	Faculty Offices
Studio Theater	Costume Sewing Shop	Visual Arts Studios
Blackbox Theater	Film Storage Vault	Shared Workshop
Shared Workshop	Film Production Room	Film Screening Room
Exhibition Gallery		Connecting Bridge
Restaurant		Working Exhibition
Auditorium Lobby		Roof Terrace



Figure 1.10 Logan Center.



Figure 1.11 Logan Center.



Figure 1.12 Logan Center.



Figure 1.13 Logan Center Cantilever.



Figure 1.14 Logan Center Site.

### SITE RESPONSE:

The building responds naturally to the site around it, which is at the edge of Midway Plaisance, a historic green space. The building offers dramatic views of Lake Michigan and downtown Chicago, as seen in Figure XX. The tower mimics the towers seen in the distance.

### UNDERPINNINGS:

The building serves the departments of visual arts, film, music, and theater. Previously these disciplines were scattered all over campus. The facility inspires creativity with the use of natural light, design elements, and different materials. The center offers versatile spaces for art making.

## CASE STUDY #2 | U OF CHICAGO: CENTER FOR THE ARTS

### ANALYSIS & CONCLUSION

#### MASSING:

The mass of the building from one side to the next is high contrast.

#### GEOMETRY:

The geometry is fairly simple with efficient rectangular shapes.

#### HIERARCHY:

The hierarchy is shown with different colors in the diagram.

#### NATURAL LIGHT:

Daylight enters from the North for optimum ambient light.

#### STRUCTURE:

The structural grid is shown in a dashed line on the floor plan.

#### PLAN TO SECTION:

The plan is unable to convey the different heights of the building.

#### CIRCULATION:

Circulation is mapped on the plan. There is one main axis across the building.

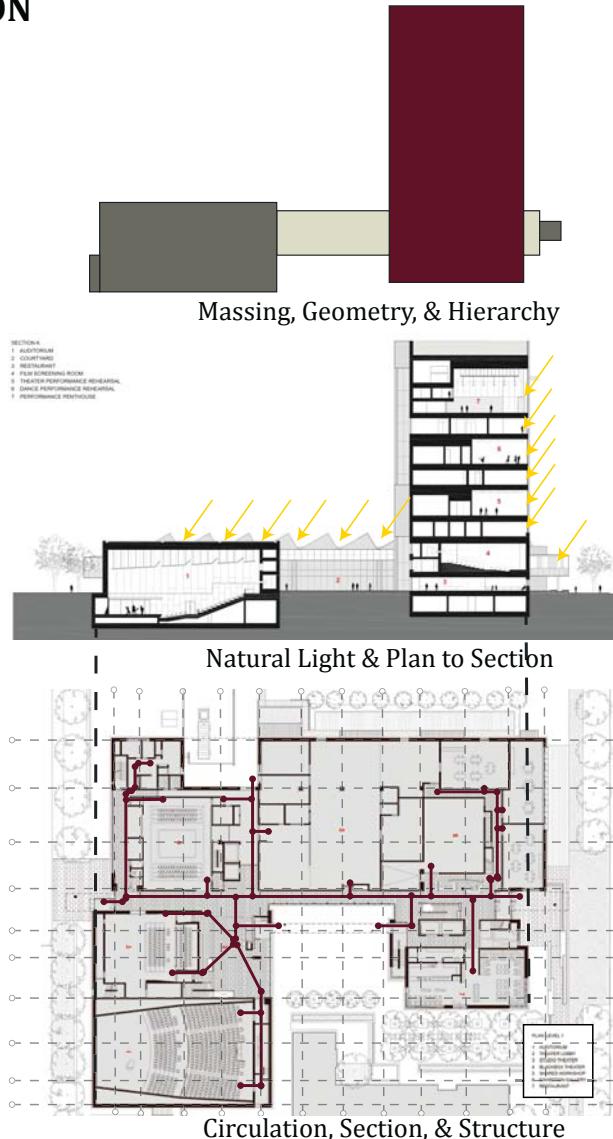


Figure 1.15 Case Study 2 Analysis.

#### WHAT DOES CASE SHOW?

The case study shows an excellent example of a program and spatial configuration. The material choices are pleasant and the amount of natural light is favorable.

#### CONTRIBUTION TO THEORETICAL PREMISE:

The case shows a great example of community pride in architecture. The case also states that art centers are a gathering space for the community.

#### DID THE THEORETICAL PREMISE CHANGE?

The theoretical premise did not change with this case study.



Figure 1.16 Logan Center for the Arts.

# CASE STUDY #3 | WALKER ART CENTER

## INTRODUCTION & FINDINGS

### PROJECT TYPE:

Art Center

### ARCHITECT:

ORIGINAL BUILDING:

Edward L. Barnes

EXPANSION:

Herzog de Meuron

### LOCATION:

Minneapolis, MN

### SIZE:

240,000 Square Feet

### MATERIALS:

Brick, curtain walls, metal panels

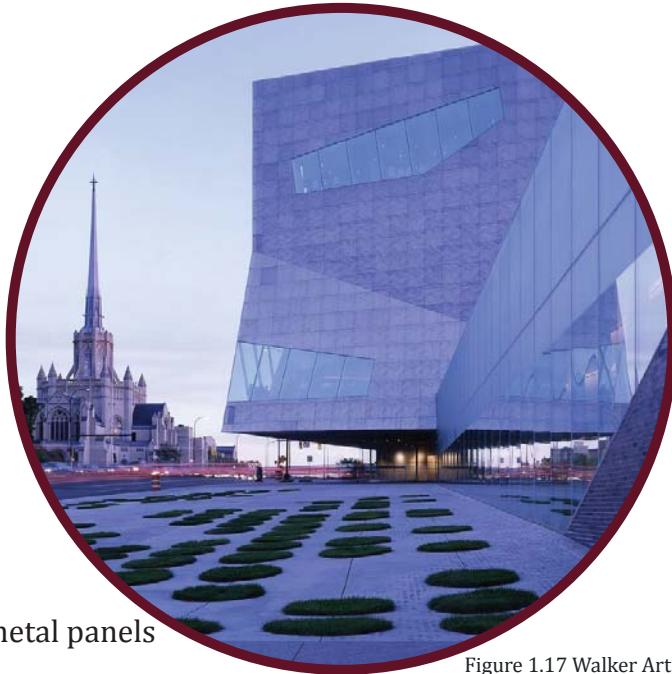


Figure 1.17 Walker Art Center.

### CHARACTERISTICS:

The contrast in materials and geometry of the spaces and the cladding make the form very dynamic. The architecture emphasizes the value of art.

### PROGRAM ELEMENTS:

Inner Lobby	Art Storage	Green Room
Auditorium	Gallery	Service Floor
Lecture Room	Shop	Lobby
Print Study Room	Offices	Event Space
Archives	Theatre Lobby	Loading Dock
Library	Theatre	Garage
Art Lab	Restaurant & Bar	Access to Garage



Figure 1.18 Walker Art Center.



Figure 1.19 Walker Art Center.



Figure 1.20 Walker Art Center Full Building.



Figure 1.21 Walker Art Center Site.

### SITE RESPONSE:

The case responds very well to the site. It frames important views of the Minneapolis skyline. It is linked to the church spires along Hennepin Avenue. The building creates a town square along the street. It is placed right next to the sculpture garden.

### UNDERPINNINGS:

The first part of the building was built in many years ago. The expansion aims to give the museum more space and enhance the street life in Minneapolis. The contrast between the old and the new provides interest and emphasizes the importance of contemporary art.

# CASE STUDY #3 | WALKER ART CENTER

## ANALYSIS & CONCLUSION

**MASSING:**  
Like case study #2, this building's mass is contrasting.

**GEOMETRY:**  
The geometry of this building varies to add interest to certain spaces.

**HIERARCHY:**  
The hierarchy is shown with different colors in the diagram.

**NATURAL LIGHT:**  
Some daylight enters from the North. The artwork needs to be protected from UV rays.

**PLAN TO SECTION:**  
The plan is unable to convey the different heights of the building.

**CIRCULATION:**  
Circulation is mapped on the plan. The circulation guides people through the museum.

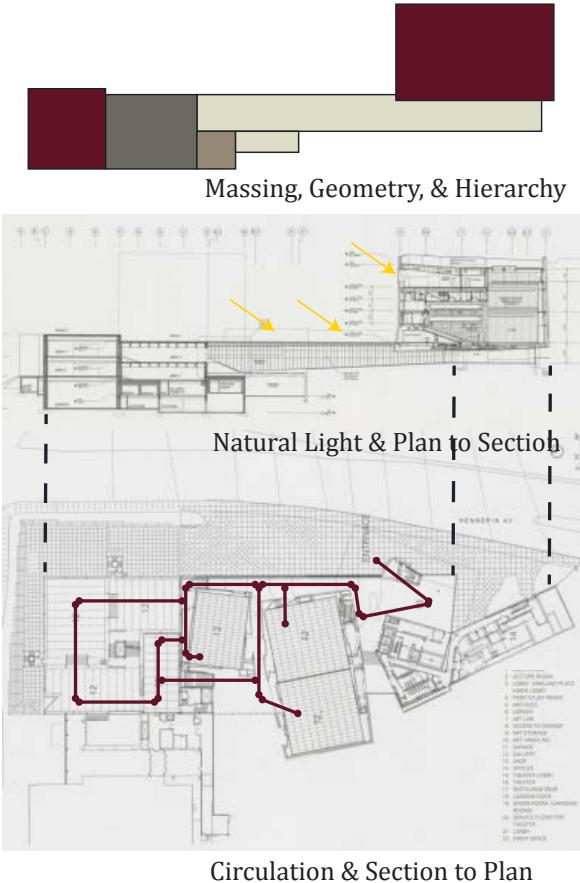


Figure 1.22 Case Study 3 Analysis.



Figure 1.23 Walker Art Center Full Building.

### WHAT DOES CASE SHOW?

The case shows how the architecture can lead people through the spaces. People naturally circulate through the galleries. This case also shows a good example of contrasting materials.

### CONTRIBUTION TO THEORETICAL PREMISE:

The case shows that architecture can emphasize the value of the arts in our society. The case is also a good example of framing views to the outdoors.

### DID THE THEORETICAL PREMISE CHANGE?

The theoretical premise did not change with this case study. This case showed that the architecture can encourage people to be interested in the arts.

## SPECIAL CASE STUDY #1

### THE STREAM AT EDGEWOOD COLLEGE



Figure 1.24 The Stream at Edgewood College.

This facility matches my ideas very closely. It is LEED certified, very similar in scale, located in the Midwest, and matches my program. Unfortunately I was unable to find more information on this facility. I will consider contacting the architect or the owner for drawings in the future.

## SPECIAL CASE STUDY #2

### RHODES ART CENTER AT NORTHFIELD MOUNT HERMON



Figure 1.25 Rhodes Art Center.

This facility is also LEED certified. It is located in a different part of the country, but I think it would be a valuable building to examine further. The program and scale match my ideas. I was unable to gather drawings for this project, but I will consider contacting the architect or owner for drawings in the future.

## TYOLOGICAL SUMMARY

### CASE STUDY SERIES

The series of case studies that are presented as typological studies for this thesis offer insightful information about the overall typology of my thesis topic. The case studies all highlight the importance of art in our society. Each case is able to bring pride to a community in a different way.

The first study presented the Central Los Angeles High School #9 for the visual and performing arts. The architecture is the highlight of this facility. The tower with a spiral stair offers an intriguing aesthetic. It creates a desire to be in that space. The spatial organization is less than desirable. The most important lesson to draw from this case is that form and function should be considered equally.

The second study presented the University of Chicago Center for the arts. I found this to be the most valuable case study. The architecture is modest, but still intriguing in its own way. The spatial organization around a central courtyard was very functional. The study shows the importance of smaller more intimate spaces in relation to artistic inspiration.

The third study presented the Walker Art Center. This study is valuable because it is located near my project site. This case is a good example of blending the old and the new. The spatial organization of this building is unique because it guides people through the galleries very smoothly. The building fits the site well and frames very particular views of the skyline.

## TYPOLOGICAL SUMMARY | CONTINUED

### CASE STUDY SERIES

The special case studies are important because they are LEED certified arts buildings. The lessons learned from those sustainable strategies could be a very informative. Unfortunately, there was not enough information on each case to conduct a full case study, but I will continue searching for more information on these two cases.

Each project has its own unique site that changed the goals of the architecture. All of the studies aimed to draw people to the building in different ways. The High School #9 was very iconic because it was located in a very busy city. The Logan Art Center was located on a university campus so the architecture didn't have to be as iconic to draw people in. The Walker Art center also was iconic due to its site in the city. The site influences the architectural decisions.

All of the case studies are vastly different, but I think the lessons learned are very similar. Arts buildings do bring the community together and it is very fitting that they become landmarks in the community. The architecture highlights and even inspires the art that goes on inside of the building. The lessons in circulation will be valuable as I start the design process. The case studies will help me solidify my program and organize the spaces in an efficient manner.

My theoretical premise has not changed after the examination of the series of case studies. The theoretical premise has been enforced by these studies.



## MAJOR PROJECT ELEMENTS | TYPES OF SPACES

## USER DESCRIPTION | GROUPS

 <p>ART</p>	<p><b>Drawing Studio</b> Drawing tables Bulletin Boards</p> <p><b>Sculpture Studio</b> With equipment</p> <p><b>Printmaking Studio</b> Multiple presses Multiple sinks</p>	<p><b>Ceramics Studio</b> With multiple kilns Glazing kitchen Pottery Wheels</p> <p><b>Painting Studio</b> With sink</p> <p><b>Photography Dark Room</b> With Sinks</p>	<p>Students will have the opportunity to take music, drama, and art lessons at the facility and participate in community choir or theatre. Students will have the opportunity to have their work featured in the art gallery and participate in community organizations. The facility will also host building tours to teach students about sustainability. The facility will provide a great creative outlet for students.</p>	 <p>STUDENTS</p>
 <p>MUSIC</p>	<p><b>Music Practice Rooms</b> 5-10 sound proof rooms Some with pianos</p> <p><b>Music Room</b> Good acoustics Seating 40 people</p>	<p><b>Recital Space</b> Seating about 100 people For small performances</p> <p><b>Performance Space</b> Seating about 250 people For dance, music, &amp; theatre</p>	<p>The facility will have rentable art studio space and music practice rooms for the public to use. People will be able to participate in art productions and workshops. All performances and art shows will be open to the public. There will always be something new for the public to view.</p>	 <p>PUBLIC</p>
 <p>THEATRE</p>	<p><b>Theatre Practice Space</b> Large space</p> <p><b>Shop</b> Woodworking equipment Painting area Costume making area</p> <p><b>Poetry/Literature Space</b></p>	<p><b>Backstage Area</b> Locker rooms</p> <p><b>Dance Studio</b> With mirrors and audio</p> <p><b>Film Lab</b> Computers with software</p>	<p>The facility will employ local artists, musicians, and actors to teach various workshops and lessons. A community theatre director will be employed for each production. A community music director will be employed to teach music. An artist will be employed to supervise and teach people how to use the equipment.</p>	 <p>TEACHERS</p>
 <p>OTHER</p>	<p><b>Reception/Lobby Space</b> Consession stand Box Office</p> <p><b>Art Gallery/Shop</b> To sell local art Gallery to view art</p> <p><b>Restrooms</b></p>	<p><b>Parking</b> Parking ramp</p> <p><b>Storage</b> For set pieces, artwork, etc.</p> <p><b>Lockers</b> Rentable storage</p> <p><b>Outdoor Performing Area</b></p>	<p>The facility will require janitorial staff, secretarial staff, and administration. Staff will be responsible for quality customer service, supervising the facility, and coordinating events. The facility will operate from 8am to 10pm, with key card access after 10pm. The facility will be able to support an audience of 250 people. The facility will support 100 vehicles.</p>	 <p>STAFF</p>

# SITE INTRODUCTION | MACRO | REGION



①

① COUNTRY: United States



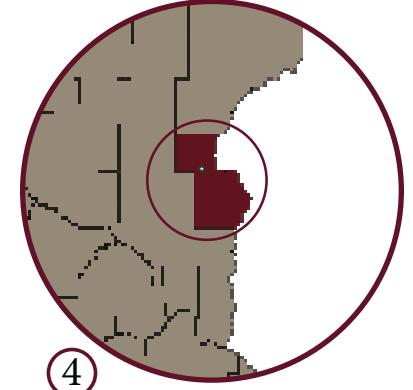
②

② REGION: Upper Midwest



③

③ STATE: Minnesota



④

④ REGION: East Central Minnesota



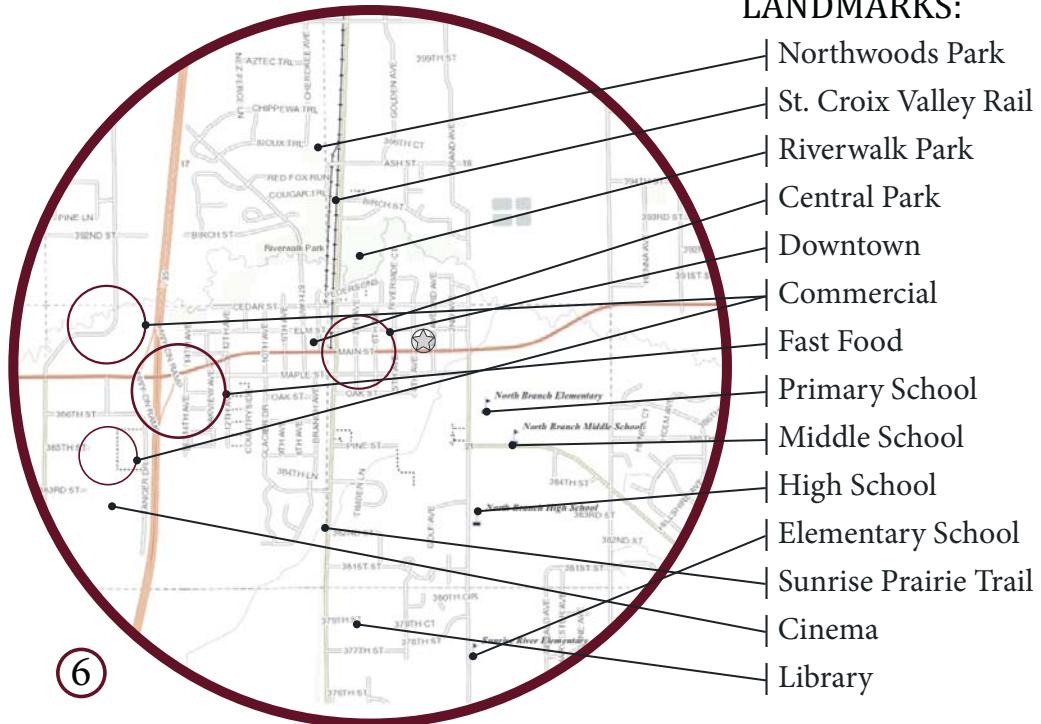
⑤

⑤ COUNTY: Chisago

⑥ CITY: North Branch

Figure 1.26 Site Region.

## SITE INTRODUCTION | MICRO | CITY



6

Figure 1.27 Landmark Mapping

### CITY: NORTH BRANCH, MN

#### POPULATION:

10,087 People

#### AREA:

36 Square Miles

#### TRANSPORTATION LINKS:

By Car: I-35, Hwy 95, Cty Rd 30

By Train: St. Croix Valley Railroad

By Foot: Sunrise Prairie Trail

North Branch currently doesn't have any community performance or visual art spaces. The little art culture exists only in the school district.

North Branch is only 45 minutes away from the Twin Cities via I-35 and 30 minutes away from Wisconsin via Highway 95. The site could potentially draw people from the Twin Cities for events.

## SITE INTRODUCTION | MICRO | SITE



### THE SITE:

6644 Main Street  
North Branch, MN

### SIZE:

1 City Block  
2.41 Acres  
310' x 370'  
114,700 sq ft

### ZONING:

Central  
Business  
District

### BOUNDARIES:

**North:** Single Family

**South:** Medium Density

**East:** Central Business District

**West:** Public, including the schools

**Future Planning:** Central Business District surrounding the site

### IMPORTANCE:

When a high school was first built on the site in 1908, an article in the newspaper read, "...that splendid mass of architecture has been a source of pride and even wonder to the citizens of North Branch" (Malmquist 2007). The program has changed with the transformation of the buildings on the site for 115 years. In 2010, the current Main Street School was demolished. The property was sold to an outstanding resident who would like to keep the property out of commercial use. The historical significance of education on the site yields a great opportunity for a fine arts center to bring back the tradition of learning and community pride associated with the site.



Figure 1.28 Site Map.

**SITE INTRODUCTION | MICRO | VIEWS**



Figure 1.29 View from the Southeast.



Figure 1.30 Trees.



Figure 1.31 Trees.



Figure 1.32 Trees.



Figure 1.33 Trees.



Figure 1.34 View from the Southwest.



Fig. 1.35 Panorama from center of site

① **Fine Arts Culture:**

Encouraging residents to participate in and view art will bring about a sense of pride in the local art created. The architecture will inspire creativity and add to the sense of place in the city.



Figure 1.36 Fine Arts Clip Art.

② **History of the Site:**

Careful attention will be given to the treatment of this historic site. The use will follow the tradition of education and strong community presence on the site.



Figure 1.37 North Branch Postcard.

③ **Sustainability:**

LEED Platinum Certification will be pursued to further a sense of pride in the community and keep operating costs close to nonexistent.



Figure 1.38 Sustainability Image.

ACADEMIC:

This thesis project will be a cumulation of everything I have learned at North Dakota State University. My academic goal is to incorporate everything I have learned into one comprehensive project that considers all aspects of design. I hope to design and document a project that has all of the characteristics of a real world project. I look forward to expanding my academic knowledge as I progress further into this project and closer to my Master of Architecture degree.

PROFESSIONAL:

This thesis will be used as stepping stone into the professional world. My professional goal for this project is to design creative and meaningful architecture that considers quality over quantity and examines many problems, including community development and environmentally friendly architecture. In my professional career I hope to be an active member of my community, an advocate for sustainable design, and someone who can make a difference in the lives of those around me.

## THESIS PROJECT GOALS | PERSONAL

### PERSONAL:

The most important personal goal I have for this project is to produce a project that I can be proud of. I set very high standards for myself and satisfying those standards will be very rewarding at the end of this project. I hope to find a solution for my hometown in the form of a fine arts center. I would like to push the boundaries of this project and explore many aspects of the project that are outside of the requirements. In the future, my personal goal is to never lose my passion for design.



## PLAN FOR PROCEEDING | TASK ANALYSIS

### ○ DEFINITION OF A RESEARCH DIRECTION:

Research will be conducted on community pride and sense of place, fine arts, the fine arts center typology, historical context of the site, analysis of the site, various requirements for the program, cost effective sustainable strategies, and LEED certification.

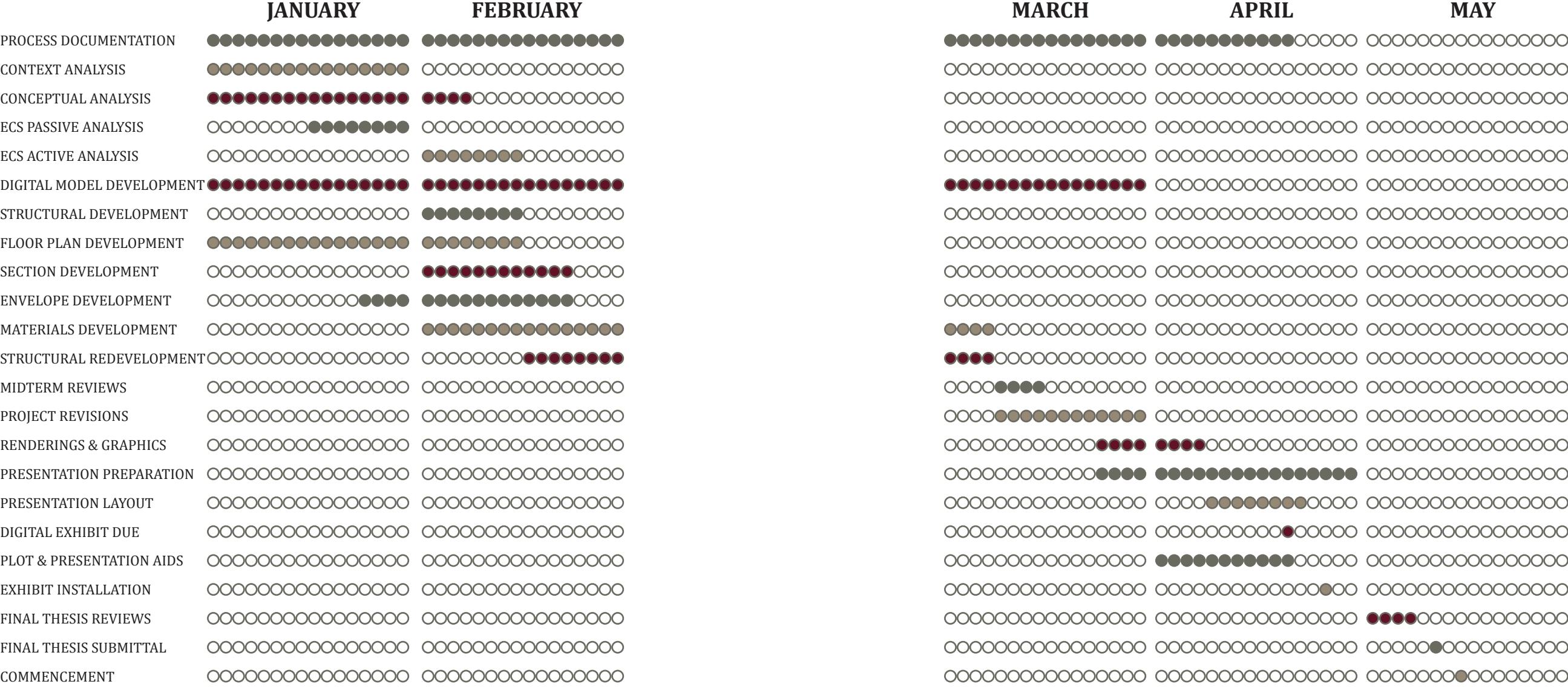
### ○ DESIGN METHODOLOGY:

The research for this project will follow a mixed method, quantitative and qualitative approach. The data will be gathered concurrently and will be integrated at different times in the research process. Quantitative data will be gathered in the form of statistical and scientific data. Qualitative data will be gathered in the form of observation, local surveys, archival searches and direct interviews. The data will be prioritized based on how closely the data supports or rejects the theoretical premise. The data will be compiled to be analyzed and interpreted. The final data will be reported in the form of text and graphics.

### ○ DESIGN PROCESS DOCUMENTATION:

The decision-making process will be documented in bi-weekly progress reports, which will include a short narrative and any applicable images. The reports will be treated as an informal journal. For the final presentation I will be able to determine when and why the critical decisions were made. By keeping the reports informal, I will be able to put my thoughts on paper without any added pressure of proper formatting or transitions. The reports may be redone at a later date in a presentable format.

# PLAN FOR PROCEEDING | TASK SCHEDULE



•◦●○PROGRAM○●◦•

## THEORETICAL PREMISE RESEARCH

### Place

“A place is a qualitative phenomenon, which we cannot reduce to any of its properties, such as spatial relationships, without losing its concrete nature out of sight” (Schulz, 1980). Phenomenology is a “return to things” rather than abstract and mental constructions. Places cannot be described in terms of their properties alone. The atmosphere and character of the place are essential properties of a place (Schulz, 1980). Therefore a sense of place is not as simple as a geographic location or the scientific, analytical concepts involving it.

Ronald Lee Fleming states, “Place is not merely what was there, but also the interaction of what is there and what happened there” (Fleming, 2007). The building should preserve the story of the history that was once in that place. It is important for architects to design for the specific place that the building will be located in, preserving the character or sense of place.



Figure 2.1 Hersbruck, Germany.  
(Knox & Mayer, 2009)

## THEORETICAL PREMISE RESEARCH

### Sense of Place

Small towns can be fantastic places in which to live, work, and play. In the United States, the fastest growing places, over the past twenty years, are small towns or towns with no more than 50,000 residents. Small towns account for 10% of the United States population, yet small towns have rarely been studied (Knox & Mayer, 2009).

Small towns in North America, including North Branch, Minnesota, have a very short history compared to small towns in Europe. Native Americans lived throughout North America and built few settlements because they moved around often and lived with nature. European pioneers traveled to North America and began settling in numerous cities hoping to get rich off of the natural resources in the area. Towns near waterways flourished because of the ability to quickly export goods. Railroads allowed some landlocked cities to flourish, while leaving others in the dust (Knox & Mayer, 2009).

Often, small cities no longer have the natural resource that they exploited which originally put them on the map. These cities are struggling to make

ends meet because there are few jobs and no resources left to exploit. The arrival of chain retail and food has allowed residents to survive off of inexpensive products. The negative effect of chains is that they put small local businesses out of business. Many small towns fail to keep their young population in town, resulting in a loss of small businesses, local distinctiveness, character, and sense of place (Knox & Mayer, 2009).

Recently many of the smaller cities located in close proximity to larger cities have been rapidly growing in a movement called counterurbanization. Small towns now have all of the same amenities as large cities with cheaper land. While globalization has benefited the majority of larger cities, small towns have experienced many negative effects. “The more places change the more they seem to look alike and the less they are able to retain a distinctive sense of place.” Big chains have expanded across the globe and into small towns. The products they offer are the same no matter where they are located. As franchise products are brought to small towns, local products are unable to compete with the low prices of franchises (Knox & Mayer, 2009).

## THEORETICAL PREMISE RESEARCH

“Big superstore and chain retailers have been allowed to spread... to sustain the local tax base. But the chains have become the economic equivalent of invasive species: voracious, indiscriminate, and often antisocial.” These big chains are dominating small cities and suffocating the local economic ecosystem. The introduction of big chains in a small town causes local businesses to close which puts local farmers and producers out of business. Many specialized products are at the verge of extinction because big chains have no interest in selling expensive local products (Knox & Mayer, 2009).

When a small town gains global and national chains, it becomes a clone town, a town just like many other towns. Small towns that retain their individual character are recognizable and distinctive. They are called home towns. Home towns typically have 18 different types of stores. The local economy flourishes in a home town and declines in a clone town (Knox & Mayer, 2009).

To combat the issues associated with dislocation, loss of identity, and loss of sense of place, many developers have created theme parks, shopping malls, and renovated historic districts. These

gimmicks have only made places feel less authentic. Sense of place has become desirable because it has become such a rare commodity. Many small towns have tried to re-create a sense of place by refurbishing historic districts, but often the actual historic character gets lost in the quest for a desirable town. The sense of place becomes inauthentic and inaccurate (Knox & Mayer, 2009).

“Urban design is a key component of small town sustainability: It can contribute to livability and sense of place by enhancing the aesthetics and functionality of places.” The success of small towns depends on a variety of different factors. Careful urban design can enhance the sense of place in the sensitivity of the architecture and the outdoor spaces it creates. Urban design can provide a place for casual meeting, places to sit and people-watch, and a sense of identity, belonging, and vitality. Authenticity depends on the response to community needs and tastes that are rooted in local climate, topography, history, and culture. It is important for a small town to have characteristics that bring people in close contact with the local identity, sense of place, and distinctiveness (Knox & Mayer, 2009).

## THEORETICAL PREMISE RESEARCH

### Creativity in the Community

A study was done by the McKnight Foundation about small towns in rural Minnesota. They found that arts and creativity can play a huge role in the economic revitalization of small towns. They found four benefits of art and creativity in the community including the creation of opportunities for engagement among people, enhancement of collaboration and community solutions through diverse leadership, help in shaping a community’s identity, and contribution to development of a small town economy (Knox & Mayer, 2009). All four benefits of art and creativity in the community support the theoretical premise for this project.

Art in the community also aids in place-making, cultural identity, and social engagement. “Community based art in the form of theatre, music, visual arts, dance, poetry, or electronic media can establish cultural identity and create social transformation and change. Small-town residents interact with each other in cultural events and thereby build social capital” (Knox & Mayer, 2009). The presence of art in the community can also contribute to social change. If people are thinking

creatively about their art, they are more likely to think creatively about the way they live (Knox & Mayer, 2009).

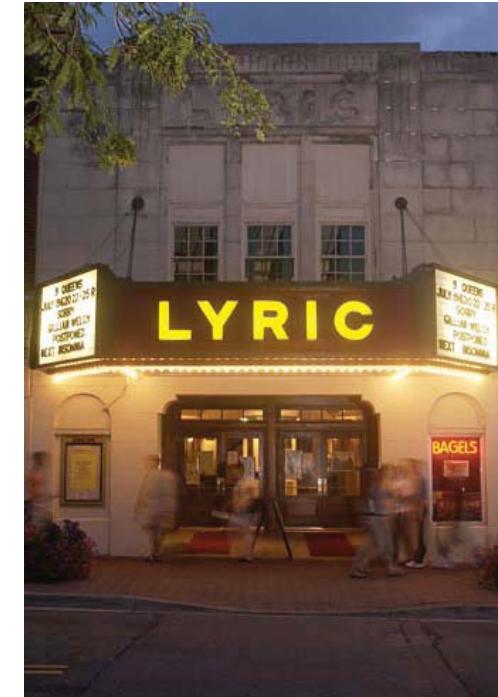


Figure 2.2 Restored Movie Theatre (Knox & Mayer, 2009).

## THEORETICAL PREMISE RESEARCH

### Case Study

New York Mills, Minnesota is an arts town with a population of only 1,129 people (Flanagan, 2003). The town had previously suffered from out-migrations and economic decline along its Main Street (Knox & Mayer, 2009). An artist name John Davis founded the New York Mills Regional Cultural Center with the support of local artists and the general public. An empty general store built in 1885 on Main Street was the perfect location for the new arts hub. Davis aimed to make art a part of daily life. The success of the cultural center led to new businesses downtown, a new auditorium at the local school, and a more vibrant community. John Davis said, “The success of these towns is not incidental; the arts breed a more progressive community that is less resistant to change and willing to look at new visions for itself” (Flanagan, 2003).

A study done by Ann Markusen and David King of the University of Minnesota’s Humphrey Institute of Public Affairs suggests that productivity and earnings rise in a region as more artists come to the area. Artists contribute jobs, goods,

and services to the community. Young Creative Class members are drawn to a community with an authentic street culture and a strong sense of place (Flanagan, 2003).

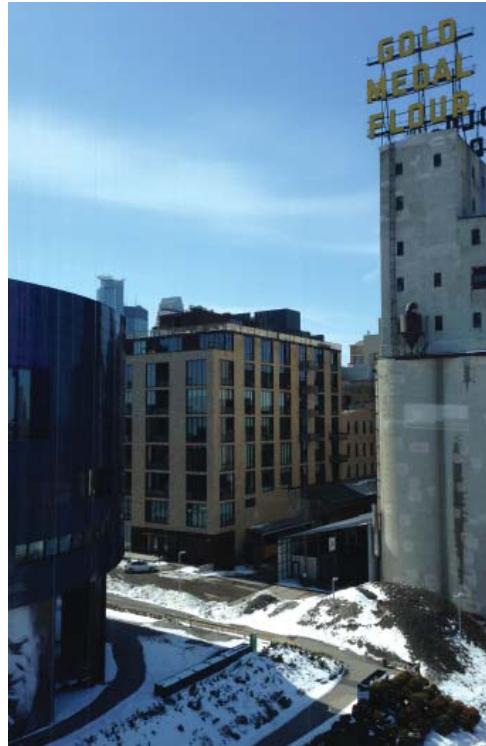


Figure 2.3 Arts in Minneapolis.

## THEORETICAL PREMISE RESEARCH

Minneapolis is one of the leading cities in the total number of people in the Creative Class. The Twin Cities has been rated as one of the best arts communities in the nation. Minnesota ranks fifth in the nation for per capita arts support. Minnesota generously supports the arts financially (Flanagan, 2003).

### Pride

Pride in a community has a strong relationship to sense of place in a community. Towns with a strong sense of place tend to have residents who take pride in their communities. Architecture can create a sense of pride in a variety of different ways.

Residents can be proud of the aesthetic of the architecture that ties in the historic character of the town. They can be proud of any design awards or LEED credentials that the project earns. They can be proud of the function of the building. One of the main goals for this project is to create pride in the community. The architecture will aim to enhance the sense of place in the town, earn a LEED Gold credential for sustainability, and aid in the production of local visual and performing art. Local art tends to naturally evoke a sense of pride.

Residents of North Branch, Minnesota were proud of the new school building built in 1908. An article in the newspaper said, “... that splendid mass of architecture has been a source of pride and even wonder to the citizens of North Branch. Pride over possession of so fine a structure and wonder over the fact that the new building has even surpassed in many respects, their expectations of last summer” (Malmquist, 2007).

The school building that they are referring to was built upon the site selected for this project. The site has had a school on it until 2011. This project will aim to create the same sense of pride in the community as the first school that was built there.



Figure 2.4 1908 Main Street School (Malmquist, 2007).

# THEORETICAL PREMISE RESEARCH

## Sustainability

As the city of North Branch, MN grows, the importance of a downtown scene increases. The site is located just four blocks from the center of the downtown area. The design of this thesis will focus on a healthy downtown, with an emphasis on sustainable strategies. Patrick M. Condon’s book, Seven Rules for Sustainable Communities says it best with a simple list of seven rules:

1. Restore the streetcar city.
2. Design an interconnected street system.
3. Locate commercial services, frequent transit, and schools within a 5 minute walk.
4. Locate good jobs close to affordable homes.
5. Provide diversity of housing types.
6. Create a linked system of natural areas and parks.
7. Invest in lighter, greener, cheaper, and smarter infrastructure.

Condon states that all seven rules must be followed to create an integrated sustainable community. Many of these rules are not directly related to my project. At this point, North Branch is unable to support a streetcar city.

Many of the residents travel to the Twin Cities for work, so a light rail system connecting North Branch to the Twin Cities would be desirable. Half of the residents have a commute to work that is longer than thirty minutes (City-Data, 2013). Public Transportation does exist in the form of a small buss called the Heartland Express (City of North Branch, 2014). The bus does not make regular stops. Fortunately much of North Branch does have an interconnected street system. The five minute walk radius from my project site includes the golf course, downtown shopping, food, churches, post office, and many other amenities. Homes in North Branch are affordable, but there are minimal jobs available. Housing in North Branch is primarily single family homes, with some multifamily dwellings. The natural areas and parks are not connected. The infrastructure on my site aim will follow these rules.

The sustainable goal for this project is to achieve LEED Gold. The criteria required for the LEED Gold Credential matches with the other goals for this project, including a lively downtown area that is walkable. The checklist for the LEED credential is shown below in figure 2.5 from the United States Green Building Council website.

# THEORETICAL PREMISE RESEARCH

LEED 2009 for New Construction and Major Renovations		Project Checklist		Project Name	Date
<b>Sustainable Sites</b> Possible Points: 26		<b>Materials and Resources, Continued</b>			
<input checked="" type="checkbox"/>	Prereq 1 Construction Activity Pollution Prevention	<input type="checkbox"/>	Credit 4 Recycled Content	1 to 2	
<input type="checkbox"/>	Credit 1 Site Selection	<input type="checkbox"/>	Credit 5 Regional Materials	1 to 2	
<input type="checkbox"/>	Credit 2 Development Density and Community Connectivity	<input type="checkbox"/>	Credit 6 Rapidly Renewable Materials	1	
<input type="checkbox"/>	Credit 3 Brownfield Redevelopment	<input type="checkbox"/>	Credit 7 Certified Wood	1	
<input type="checkbox"/>	Credit 4.1 Alternative Transportation—Public Transportation Access	<b>Indoor Environmental Quality</b> Possible Points: 15			
<input type="checkbox"/>	Credit 4.2 Alternative Transportation—Bicycle Storage and Changing Rooms	<input type="checkbox"/>	Prereq 1 Minimum Indoor Air Quality Performance		
<input type="checkbox"/>	Credit 4.3 Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	<input checked="" type="checkbox"/>	Prereq 2 Environmental Tobacco Smoke (ETS) Control		
<input type="checkbox"/>	Credit 4.4 Alternative Transportation—Parking Capacity	<input type="checkbox"/>	Credit 1 Outdoor Air Delivery Monitoring	1	
<input type="checkbox"/>	Credit 5.1 Site Development—Protect or Restore Habitat	<input type="checkbox"/>	Credit 2 Increased Ventilation	1	
<input type="checkbox"/>	Credit 5.2 Site Development—Maximize Open Space	<input type="checkbox"/>	Credit 3.1 Construction IAQ Management Plan—During Construction	1	
<input type="checkbox"/>	Credit 6.1 Stormwater Design—Quantity Control	<input type="checkbox"/>	Credit 3.2 Construction IAQ Management Plan—Before Occupancy	1	
<input type="checkbox"/>	Credit 6.2 Stormwater Design—Quality Control	<input type="checkbox"/>	Credit 4.1 Low-Emitting Materials—Adhesives and Sealants	1	
<input type="checkbox"/>	Credit 7.1 Heat Island Effect—Non-roof	<input type="checkbox"/>	Credit 4.2 Low-Emitting Materials—Paints and Coatings	1	
<input type="checkbox"/>	Credit 7.2 Heat Island Effect—Roof	<input type="checkbox"/>	Credit 4.3 Low-Emitting Materials—Flooring Systems	1	
<input type="checkbox"/>	Credit 8 Light Pollution Reduction	<input type="checkbox"/>	Credit 4.4 Low-Emitting Materials—Composite Wood and Agrifiber Products	1	
<b>Water Efficiency</b> Possible Points: 10		<input type="checkbox"/>	Credit 5 Indoor Chemical and Pollutant Source Control	1	
<input checked="" type="checkbox"/>	Prereq 1 Water Use Reduction—20% Reduction	<input type="checkbox"/>	Credit 6.1 Controllability of Systems—Lighting	1	
<input type="checkbox"/>	Credit 1 Water Efficient Landscaping	<input type="checkbox"/>	Credit 6.2 Controllability of Systems—Thermal Comfort	1	
<input type="checkbox"/>	Credit 2 Innovative Wastewater Technologies	<input type="checkbox"/>	Credit 7.1 Thermal Comfort—Design	1	
<input type="checkbox"/>	Credit 3 Water Use Reduction	<input type="checkbox"/>	Credit 7.2 Thermal Comfort—Verification	1	
<b>Energy and Atmosphere</b> Possible Points: 35		<input type="checkbox"/>	Credit 8.1 Daylight and Views—Daylight	1	
<input checked="" type="checkbox"/>	Prereq 1 Fundamental Commissioning of Building Energy Systems	<input type="checkbox"/>	Credit 8.2 Daylight and Views—Views	1	
<input checked="" type="checkbox"/>	Prereq 2 Minimum Energy Performance	<b>Innovation and Design Process</b> Possible Points: 6			
<input checked="" type="checkbox"/>	Prereq 3 Fundamental Refrigerant Management	<input type="checkbox"/>	Credit 1.1 Innovation in Design: Specific Title	1	
<input type="checkbox"/>	Credit 1 Optimize Energy Performance	<input type="checkbox"/>	Credit 1.2 Innovation in Design: Specific Title	1	
<input type="checkbox"/>	Credit 2 On-Site Renewable Energy	<input type="checkbox"/>	Credit 1.3 Innovation in Design: Specific Title	1	
<input type="checkbox"/>	Credit 3 Enhanced Commissioning	<input type="checkbox"/>	Credit 1.4 Innovation in Design: Specific Title	1	
<input type="checkbox"/>	Credit 4 Enhanced Refrigerant Management	<input type="checkbox"/>	Credit 1.5 Innovation in Design: Specific Title	1	
<input type="checkbox"/>	Credit 5 Measurement and Verification	<input type="checkbox"/>	Credit 2 LEED Accredited Professional	1	
<input type="checkbox"/>	Credit 6 Green Power	<b>Regional Priority Credits</b> Possible Points: 4			
<b>Materials and Resources</b> Possible Points: 14		<input type="checkbox"/>	Credit 1.1 Regional Priority: Specific Credit	1	
<input checked="" type="checkbox"/>	Prereq 1 Storage and Collection of Recyclables	<input type="checkbox"/>	Credit 1.2 Regional Priority: Specific Credit	1	
<input type="checkbox"/>	Credit 1.1 Building Reuse—Maintain Existing Walls, Floors, and Roof	<input type="checkbox"/>	Credit 1.3 Regional Priority: Specific Credit	1	
<input type="checkbox"/>	Credit 1.2 Building Reuse—Maintain 50% of Interior Non-Structural Elements	<input type="checkbox"/>	Credit 1.4 Regional Priority: Specific Credit	1	
<input type="checkbox"/>	Credit 2 Construction Waste Management	<b>Total</b> Possible Points: 110			
<input type="checkbox"/>	Credit 3 Materials Reuse	Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110			

Figure 2.5 LEED Checklist.

## THEORETICAL PREMISE RESEARCH | SUMMARY

The research focused on the theoretical premises for this project. The theoretical premises for this project are:

- 1.) A visual and performing arts center will give students an education in the arts that the school is unable to provide.
- 2.) A visual and performing arts center will provide the community the chance to create art that can be shared with the whole community.
- 3.) The architecture can provide a new focal point and gathering space for the community.
- 4.) The sustainable architecture will provide the community with a high quality facility without any financial burden.
- 5.) A LEED Platinum certified arts center will bring a sense of pride to the community.

The topics covered in the research include the definition of place, sense of place in small towns, creativity in the community, a case study, pride, and sustainability. The results of this research confirm the premises I have listed. The first section on the definition of place describes place as having more than just a scientific and analytical definition. The definition of place included the more human characteristics like atmosphere and character. The definition of place stated in this research is the type of place I will be striving to design.

The second section of research on a sense of place in small towns describes why small towns tend to lose their sense of place and what we can do about it. Careful urban design can solve many of the problems associated with loss of place. The research I conducted for this section will help solve the sense of place issues in the community.

## THEORETICAL PREMISE RESEARCH | SUMMARY

The third section discusses the benefits of creativity and art in the community. Art in the community can enhance the sense of place, provide a more social character, and encourage people to think creatively about the community they live in. This research proves that arts in the community is beneficial for everyone involved.

The fourth section is about a case study of an arts town in Minnesota. The art center was created by a local artist and the center provided a variety of benefits to the community including new businesses downtown, a new auditorium for the local school, and a more vibrant community. Minnesota is actually a very artistic state. The fact that the state of Minnesota values the arts is important for this project.

The fifth research section discusses how architecture can aid in community pride. When the new school building was built on this project site in 1908 residents were incredibly proud of the new building. Now 115 years later, I will aim to create that same sense of pride on the same site.

The sixth section is about sustainability in the community. Many of the rules for sustainability can be incorporated in my design. This project will shoot for LEED Gold certification. The LEED checklist is included in the section for reference as I begin to develop the project further.

The research I have conducted reinforces the theoretical premises for this project and offers some design solutions that could aid in the achievement of these premises.

## PROJECT JUSTIFICATION

“Perhaps, part of the value of, feeling of identity with, or sense of belonging to, that is associated with any small town or any community of people, has to do with working, playing and interacting with folks whom you know, understand, worship with, trust, do business with, are related to, or have similar traditions, customs, or lifestyles.” –Max Malmquist, 2007

The town of North Branch, Minnesota lacks a sense of place and community pride. The town is slowly turning over to global franchises, which are continually diminishing the sense of place in the community by putting local businesses out of business and eliminating everything that is unique about the community. The lack of unique qualities results in the lack of pride in the community.

A visual and performing arts center can solve many of the problems of this small town. Local art is able to restore a sense of pride and local culture to the community. Art brings people together in a very social manner. Located in the downtown area, this building will encourage artists and the community to support local businesses. The site is located in an accessible area of North Branch, so people from anywhere in the region can easily come to the center.

The architecture will be sensitive to the history of the site, evoking a sense of pride in the history of North Branch. The facility will aspire to be LEED Gold certified to reduce the environmental impact and the operating costs of the facility.



## HISTORICAL, SOCIAL, & CULTURAL CONTEXT

Ojibway and Dakota Indians periodically inhabited the land where North Branch exists today prior to 1837. The native people did not settle in one place. They moved around the region. Settlers purchased the land from the Native Americans in the Treaty of 1837. The treaty allowed white men to move in and own the land without any issues with the native people. The region was originally split up by townships. Branch Township was incorporated as a 36 square mile township between Fish Lake Township and Sunrise Township in 1872. North Branch became a 1 square mile village, surrounded by Branch Township in 1901. In 1974, both Branch and North Branch became cities. In 1994, Branch and North Branch joined together to make one 36 square mile city (Malmquist, 2007). The name 'North Branch' is derived from the town's location on the north branch of the Sunrise River (North Branch Centennial Committee (NBCC), 1981).

The city of North Branch, Minnesota was at its economical peak from 1892 to 1910. Settlers first came to North Branch because the cost of land was low. They began by clearing the oak trees from their property to farm wheat, which was a good cash crop. The wheat crop failed because the soil

was light powdery sand that was not capable to retaining moisture. Reuel L. Hall, a man with a vast knowledge of potato farming saw value in the soil of North Branch. He opened a potato starch factory in 1886 in Anoka and encouraged local farmers that the land was ideal for potatoes. By 1892, there were two potato starch factories in North Branch, one owned by Reuel L. Hall and the other owned by a cooperative of local farmers. In 1892, North Branch shipped out over a million bushels of spuds and produced over one ton of potato starch. In 1909, eighty tons of potato starch was produced. In 1911, Chisago County had two million bushels of potatoes, which was valued at one and a half million dollars (Leaf, 2004).

Starting in 1913, the potato crop began developing issues from a variety of fungi, diseases, bugs, and lack of nutrients in the soil. There were a few solutions to these issues, such as using virgin soil and a seeding that was guaranteed to be free of disease. The amount of potatoes farmed never again was as high as it was in 1911 (Leaf, 2004). The amount of land dedicated to potato farming continued to grow until 1931, but the potato yield decreased to less than half of what it was in 1925. The Farmer's Starch

## HISTORICAL, SOCIAL, & CULTURAL CONTEXT

Factory closed and was later converted into a pickle factory (Malmquist, 2007). The economic boom during that time was a great way for the town of North Branch to develop a strong foundation for future growth.



Figure 2.6 Potato Crop (Malmquist, 2007).

After farming potatoes became less favorable, farmers were encouraged to start a creamery. The Dairy industry was a very stable industry, but it required a learning curve and a team effort because dairy is perishable. North Branch was one of the last towns to build a creamery in 1910. Farmers switched from growing potatoes

to growing alfalfa to feed the cows (Malmquist, 2007).

In the late 1920s, the farming economy of North Branch began decreasing. Farmers had purchased special new equipment to produce more products, but the demand decreased because of overproduction. The Great Depression hit North Branch hardest in 1932. Farmers were faced with an intense drought and sweltering heat that lasted for 6 years. The natural resources that people were using to make their money were depleted. Families lost their homes and banks were unable to pay people their money back because they had borrowed money to farmers to buy land (Malmquist, 2007).

Transportation in the early years of North Branch consisted of footpaths, most of which were created by the Native Americans in the area prior to 1850. Railroads began connecting important places by 1862. A railway from the Twin Cities to Lake Superior had always been an idea, but it became a reality when private investors William Banning and Jay Cooke got on board. The Lake Superior and Mississippi Railroad, completed in 1870, became part of the Great Northern Railroad, merged with the Northern Pacific Railway Company,

## HISTORICAL, SOCIAL, & CULTURAL CONTEXT

and became the Burlington Northern Railroad. The North Branch Station handled more freight than any other station from the Twin Cities to Duluth (Leaf, 2004).

Chisago County completed Highway No. 1 running through the county north south in 1916. Highway No. 1 was a gravel road until 1927 when it was paved with concrete. It was the first paved road in the area. The state highway department organized the continuation of Highway No. 1 from the Twin Cities to Duluth. They designed the road to avoid sharp corners and railroad crossings. The road changed its official name from Highway No. 1 to U.S. Highway 61 and eventually the road connected Minnesota to states to the south along the Mississippi River. In North Branch and surrounding towns, Old Highway 61 runs parallel to the old railroad path. State Highway 95, which runs east west through North Branch, was further developed in 1936, with a new bridge over the Sunrise River. Highway 95 wasn't paved until 1940 (Malmquist, 2007).

In 1969, Interstate 35, a limited access highway, was completed through most of Minnesota (Malmquist, 2007). The paved roads made it easy for residents of North Branch to travel out of town

for work on a regular basis. People moved to North Branch because the land was cheap and traveling for work was feasible. The new residents didn't necessarily care about their community because many of them didn't work in town. Sue Leaf said it best in her book, "Potato City: Nature, History, and Community in the Age of Sprawl."

*There is a heavy cost to urbanization, and not all losses can be measured in dollars and cents. People see the new AmericInn and Kentucky Fried Chicken franchises and worry about becoming "just like everyone else." As the oak trees come down or wither from oak wilt, as the last prairie grass fringes are replaced by bluegrass, as farmsteads that have served as landmarks for over a century disappear, there is a sense that history itself is evaporating. The natural world, the various recounting of the people who have lived their lives in North Branch, their buildings, their craft- all these contribute to a sense of place, convincing residents that this community, situated on the north branch of the Sunrise River, is a special patch of earth.* (Leaf, 2004, pp. 178)

## HISTORICAL, SOCIAL, & CULTURAL CONTEXT

The town of North Branch had a variety of different natural disasters that aided in the destruction of sense of place in the town. Both fire and tornadoes were a threat to the town of North Branch.

In 1892, a fire destroyed most of the south side of Main Street and west of 7th Avenue. Many of the buildings were rebuilt that same year. There were many fires throughout the history of North Branch, but none as big as the fire of 1914. The fire engine broke down and residents began fighting the fire by bucket. They sent to Pine City and Rush City, but they didn't arrive until it was too late. Fifty thousand dollars of damage was done. There was one brick building that separated the fire from the rest of the buildings in town. If not for that building, the whole town would have burned (NBCC, 1981). From then on, the exterior surface of all new businesses had to be made of incombustible material (Malmquist, 2007). The fire of 1914 is the reason why the town looks so new and plain today (Leaf, 2004). The lack of old buildings in town contributes to the lack of a sense of place.

In 1906, a tornado ripped through the outskirts of town. Many farms were heavily damaged on the outskirts of

town. Two people were killed in the storm and many were injured. Another storm made up of straight line winds torn up many trees in the area and killed one man in 1942 (Leaf, 2004). Straight line winds lifted the roof off of the middle school in the late 2000's.

The first settlers coming to in North Branch in the 1950s had a strong belief in formal learning. They created small schools that were meant for learning and worship. Many small schools were built in the area. In 1873, Chisago County had 29 school buildings. Land was set aside for schools in each township. North Branch School No. 32 was started in 1871 and was the first known school in North Branch. It was located on the corner of 6th Ave and Main Avenue, just two blocks west of the project site. An additional classroom was added to North Branch School No. 32 in 1885. By 1895, the two room school was much too small for over 100 students in attendance (Malmquist, 2007).

The school purchased the entire city block between Third Avenue and Fourth Avenue, just north of Main Street, for \$659. The city block described here is the site of this project. A two story school was built on the site. The attendance at the school

## HISTORICAL, SOCIAL, & CULTURAL CONTEXT

continued to increase year after year. Many residents were advocating for a high school, that would serve North Branch and surrounding communities, to be built in North Branch.



Figure 2.7 1895 Main Street School (Malmquist, 2007).

In 1907, citizens voted to build a new school, which would include the first high school in North Branch. The new school would be built on the same site, so the old school was moved four blocks away to be used as the town hall. The new school building was ready by 1907 (Malmquist, 2007).

In 1930, the state called for an addition to the school building. The addition consisted of an auditorium/gymnasium, three classrooms, and an assembly hall. The addition was still

standing when I went to school there in 2001. At that time there were 265 students in attendance. The school bus first started to be used in 1930 to drive students who lived further away from school (Malmquist, 2007). Another addition was added in 1938. There were many demolitions and additions to the old Main Street School before I went there in 1996. At that time, the school consisted of four different wings. The school had poor circulation and it was very old. The whole complex was demolished in 2011 as a result of the building's age and lack of funding in the school district (Malmquist, 2007).



Figure 2.8 1908 Main Street School (Malmquist, 2007).

## HISTORICAL, SOCIAL, & CULTURAL CONTEXT



Figure 2.9 1930's Main Street School (Malmquist, 2007).

North Branch has grown to a population of over 10,000. Over half of the population travels over thirty minutes to and from work each day (City-Data.com, 2013). Farming is no longer the main income for a majority of North Branch residents.

Interstate 35 has provided the traffic required for big box retail stores to be successful. Tanger Outlet Mall was built in 1992 as one of the first malls in the region. In 2010, a County Market put the local grocery store out of business. A Shopko was built next to the freeway for any shopping needs. Tanger Outlet Mall was built in 1992 as one of the first malls in the region. Many small businesses have gone out of business in the downtown area because of all

the new stores near the freeway.

North Branch now has four school buildings with about 3,000 students. The school district has been suffering financially since the early 2000's. North Branch schools have had \$17 million in budget cuts since 2003. The school has tried and failed to pass seven operating levies to make up for the budget cuts (Kytonen, 2013). Residents were unable to help the school financially and the students have suffered because of it.

Countless extra fine arts programs have been cut since the school began struggling. French Club, Drama Club, Future Leaders of America, marching band, Odyssey of the Mind, and cheer leading are a few of the many activities that were cut from North Branch schools to save money.



Figure 2.10 1970's Main Street School (NBCC, 1981).

## SITE NARRATIVE



Figure 2.11 Access to North Branch.



Figure 2.12 1900's Main Street (Malmquist, 2007).



Figure 2.13 1905 Main Street (Malmquist, 2007).

There are three major highways from which to approach the town of North Branch. Interstate 35 is the highway that brings the most traffic through the west side of North Branch. It is rumored that the Holiday gas station closest to the freeway is the most used Holiday station in Minnesota. Holiday has added two new Holiday station stores near the freeway in the past ten years. Highway 95 runs east west through North Branch intersecting I-35. Many people come to North Branch via Highway 95 simply to get on the freeway. On the east side of the freeway, Highway 95 is called Main Street and it runs along the south side of the site four blocks east of Old Highway 61 (County Road 30). Old Highway 61 runs parallel to the freeway from the cities all the way to Duluth. Old Highway 61 brings traffic through the heart of each city along the way. People approaching the project site will use one of these three methods to get there. The site is easily accessible from major cities like St. Cloud, Duluth, and the Twin Cities.

The west side of North Branch consists of big box retail and fast food. The area was not designed to be walkable. The east side of North Branch becomes more intimate with businesses right on the street and easy access for pedestrians to walk from business to

## SITE NARRATIVE

business, especially directly west of Old Highway 61, which is the oldest and most charming part of town.

Upon approaching the project site, people will notice the abundance of tall elm trees that were planted along Main Street in 1904 (Malmquist, 2007). See figures 2.12 and 2.13 to the left that show before and after the trees were planted. The site is currently a city block of flat grass with 8 mature elm trees on the south and east sides of the block. The old elm trees are the only hints given about the history of the site. The elm trees that remain on the site have survived the Dutch Elm Disease that killed many of the other elm trees in town (Malmquist, 2007).

The south and west sides of the block have an existing sidewalk in fair condition. The sidewalk on the west side is adjacent to the curb and the sidewalk on the south side is about four feet from the curb. The site is bounded by a concrete curb on all four sides. A fire hydrant resides on the southeast corner of the site. Highway sign age exists at corners and along Main Street. The site is 2.41 acres of open, flat, grassy land. The trees and sidewalks exist along the perimeter of the property, so they can be preserved when the site is developed.

A funeral home is to the west and a USDA Service Center is to the south. The site is mostly surrounded by single family housing. A majority of the houses were built in the early 1900's. This site has been empty since the old Main Street school was demolished in 2011. The site was purchased by Jerry Peterson, owner of a local business, Peterson's Mill. The Peterson family purchased the mill in 1956 and it remains one of the larger functioning mills between the Twin Cities and Duluth to this day (NBCC, 1981). Jerry would like to keep the property out of commercial development (Knutson, 2013). The school district has agreed to maintain the grass for the public to use. The public has rarely used this site since the building was taken down.

This site was chosen because of its importance to the community. Since it was the site of a school for the past 115 years, the site holds sentimental value to anyone who went to school there. The location, just four blocks from the main intersection, brings people and character to the downtown area. The project typology will naturally derive a sense of place and pride in the fine art produced there. This site is an excellent place for the creation of a sense of place and pride in the community.

## SITE ANALYSIS | QUALITATIVE

### Views & Vistas

The views from the site are filled with homes and mature trees. There are two commercial buildings visible from the site. Due to the flat nature of the city and the height of the trees, the only views available are those adjacent to the site. The old elm trees are an integral part of the character of the site.



Figure 2.14 Site Photos.

## SITE ANALYSIS | QUALITATIVE



The approach from downtown includes views of the oldest buildings in town. The buildings and trees fronting Main Street create a more human scale as people approach the site at a slower speed. The stretch of 6 blocks on Main Street, east of Old Highway 61, is the most pedestrian friendly area in the city.



Figure 2.15 Town Photos. Google Maps Images

## SITE ANALYSIS | QUALITATIVE

### Built Features

There are no built features on the site, although it is completely surrounded by built features. Homes are on all four sides. There are two businesses adjacent to the site and six businesses farther away (figure 2.16). To the west, there is a small funeral home. To the south, there is a USDA service building.



The site is located on the western edge of the central business district, so the use becomes more dense in commercial use as people move west from the site.



The site had a school building on it for 115 years, which explains the residential development nearby. The new school buildings are located a few blocks to the south east.



Figure 2.17 Site Photos.

## SITE ANALYSIS | QUALITATIVE



### Light Quality

The light quality on the site is very good. There are eight trees around forty feet tall that cast shadows on the site. There are no other obstructions on the site. There are trees of similar height on the city blocks surrounding the site. Some shadows may be cast at certain times of the day.



Figure 2.18 Site Photos.

### Vegetation

The vegetation on the site is very minimal. There are eight mature elm trees that were planted along the street in 1904 (Malmquist, 2007). The grass was planted for the public after the Main Street School was demolished in 2011 (ECM Post, 2011).

### Wind

The city blocks surrounding the site provide a dense barrier against wind penetration. The areas on the site most susceptible to stronger winds are the areas closest to the edge of the site. Wind can easily travel along the streets. See figure 2.19 for predicted wind patterns on the site.



Figure 2.19 Wind on the Site.

## SITE ANALYSIS | QUALITATIVE

### Human Characteristics

The human characteristics on the site are the sidewalks on the west and south edge of the site, the fire hydrant on the southeast corner, and the many traffic signs along Main Avenue and at the corners.

There are no areas untouched by humans near the site. The trees were planted along Main Avenue in 1904 (Malmquist, 2007). It is possible that pieces of the demolished school building still exists underground.

### Distress

The distress on the site is evident in the man made features of the site. The curb and sidewalk are damaged in many different places and weeds grow through the sidewalk all over. The roads on the west, north, and east side of the site are worn and repaired several times.

The old elm trees on the site show signs of distress in the broken limbs and dead branches. The trees have existed there for over 100 years. They have experienced the many tornados and droughts that North Branch has gone through.

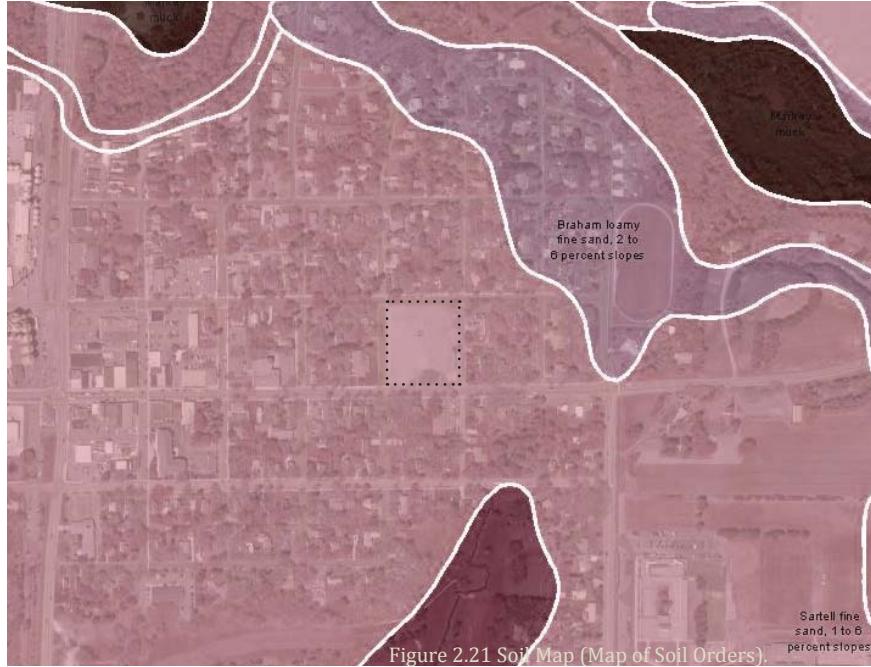


Figure 2.20 Site Photos.



## SITE ANALYSIS | QUANTITATIVE

### Soils



Dominant Soil Order: Entisols  
Percent Entisols: 85%  
Dominant Soil Suborder:  
Psammments  
Percent Psammants: 85%  
Farmland Class: Not Prime  
Farmland  
Engineering Classification:  
Sartell Fine Sand  
Slope: 1-6%

The soil in the area is very sandy in nature due to the glaciers that were over Minnesota many years ago.

The soil is not prime farmland, although it is the perfect environment for potatoes to grow successfully.

## SITE ANALYSIS | QUANTITATIVE

### Topography

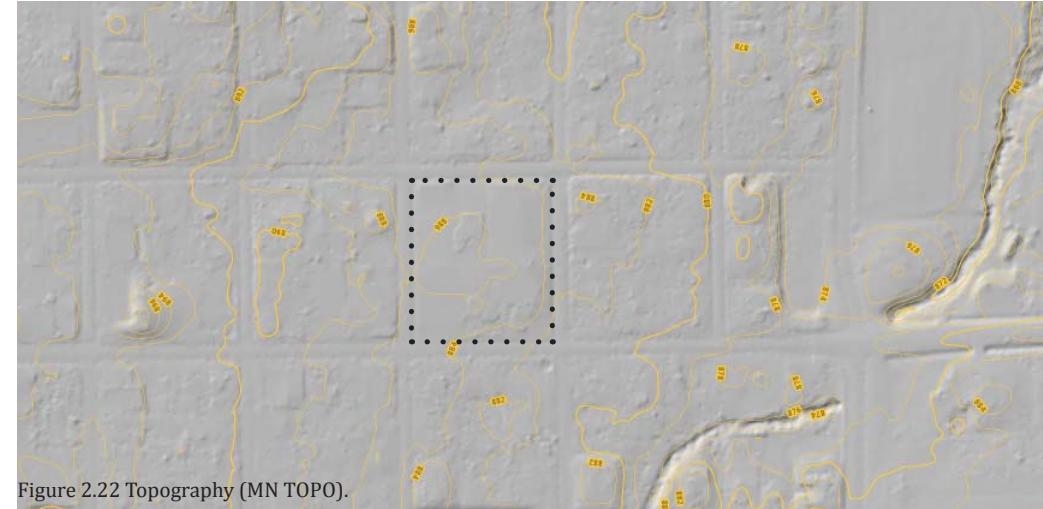


Figure 2.22 Topography (MN TOPO).

The slope on the site is about 1.5%. The site changes by no more than four feet in elevation. The southeast corner of the site is the lowest area. The center of the site is the highest area. The natural slope on the site is sufficient for drainage. The area with the greatest slope near my site is where the Sunrise River flows. See Figure 2.23.

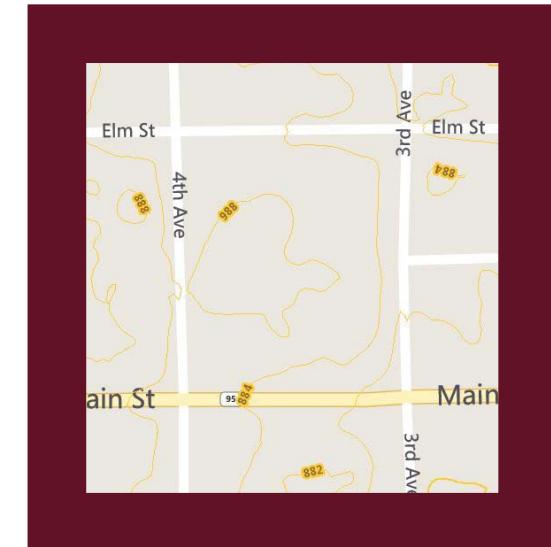


Figure 2.23 Topography (MN TOPO).

**SITE ANALYSIS | QUANTITATIVE**

**Traffic**

The south side of the site has the most vehicular and pedestrian traffic. Main Street (MN State Highway 95) is the main path traveling east west through North Branch. Highway 95 starts in St. Cloud and ends in Taylors Falls. The speed limit on is 30 miles per hour on all four roads surrounding the site. The most pedestrian traffic occurs along Main Street as well. Pedestrian traffic near the site is light, but it gets heavier towards downtown. Students are most likely to walk near the site because the schools are a few blocks to the southeast. See figure 2.25 for a graphical analysis.



**Noise**

The primary noise heard from the site will be vehicles traveling along Main Street. Vehicles travel along Main Street 24 hours per day. Traffic is heaviest before and after school. Traffic is almost always present on Main Street. Other noises could come from the residents who live within a few blocks of the site. See figure 2.25 for graphical analysis.

**Utilities**

Utilities are buried under the roads. The Main Street School used to be on this site, so there are all major utilities all readily available. Utilities run past the site on all four sides to serve the residential areas nearby.

**SITE ANALYSIS | QUANTITATIVE**

**Traffic, Utilities, & Noise Map**

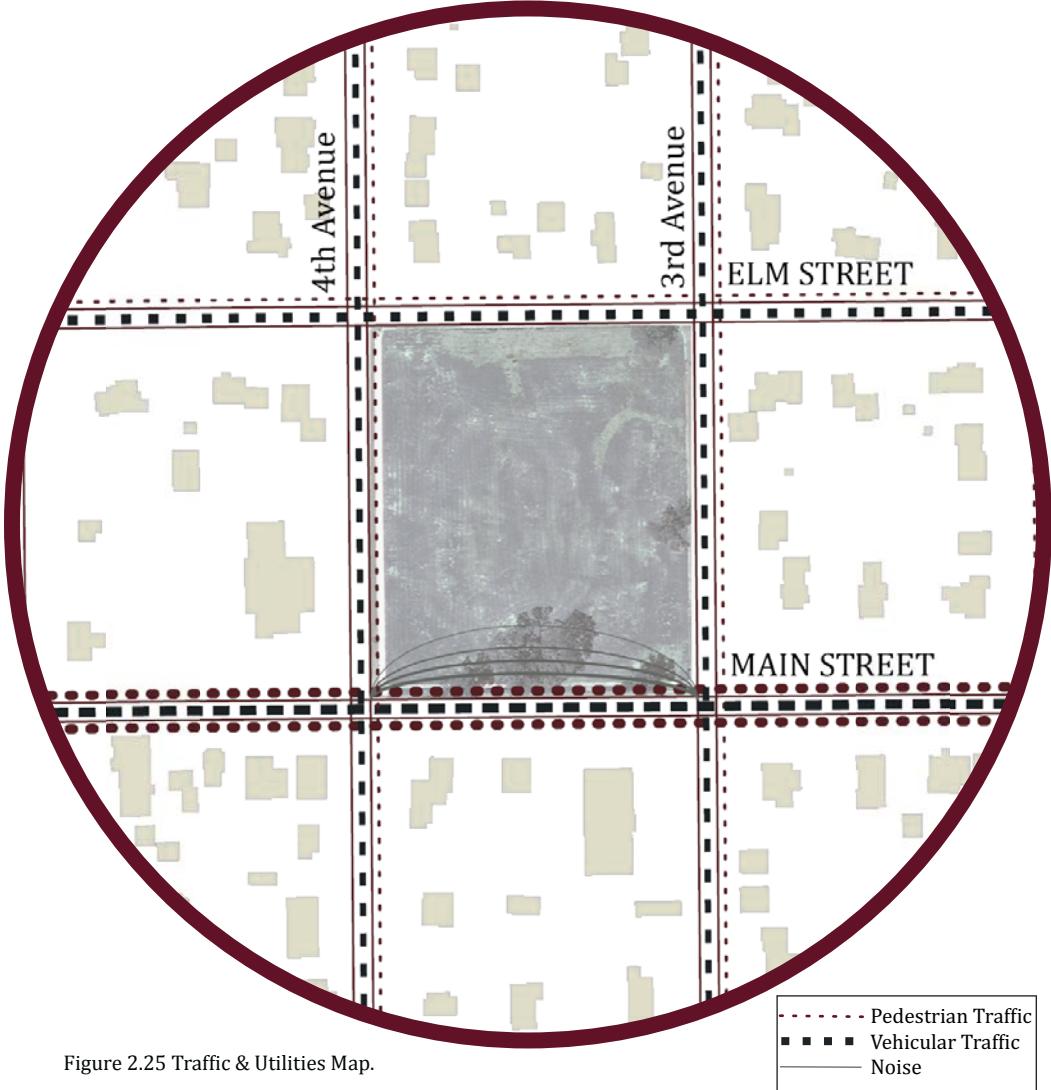


Figure 2.25 Traffic & Utilities Map.

**SITE ANALYSIS | SITE RECONNAISSANCE**



Figure 2.26 Site Reconnaissance.

**SITE ANALYSIS | SITE RECONNAISSANCE**

Figure 2.27 Site Reconnaissance.



# SITE ANALYSIS | SITE RECONNAISSANCE

Figure 2.28 Site Reconnaissance.



## SITE ANALYSIS | CLIMATE

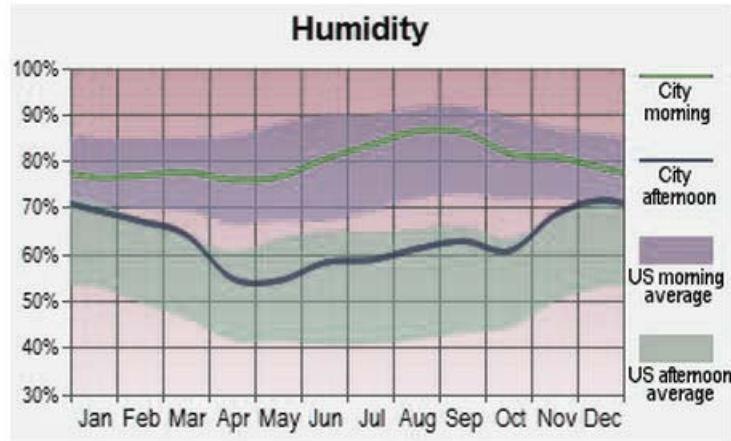
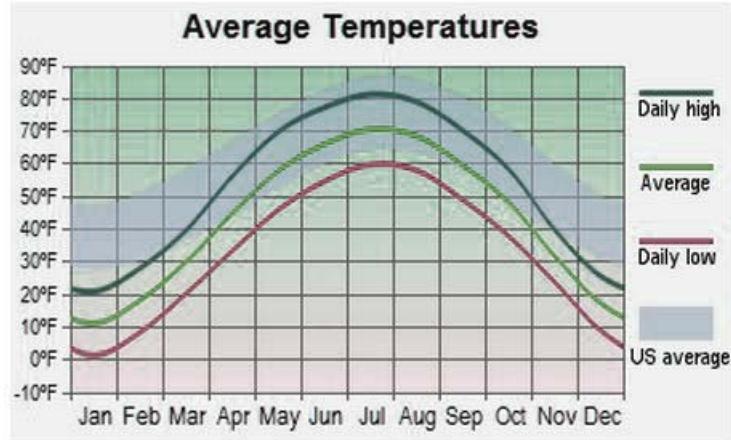


Figure 2.29 Climate (City-Data.com).

## SITE ANALYSIS | CLIMATE

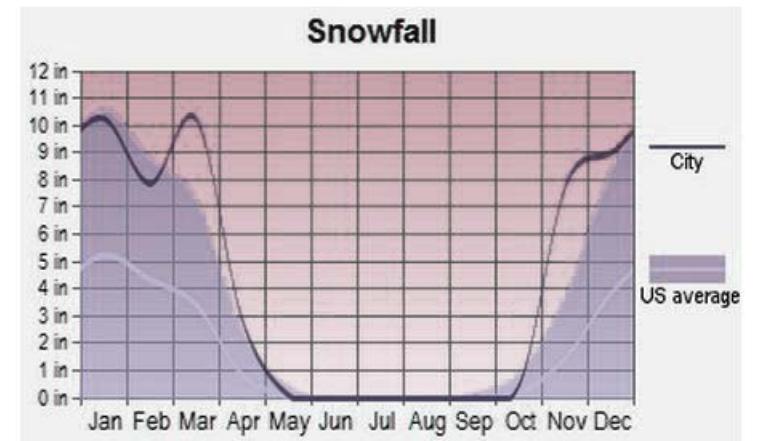
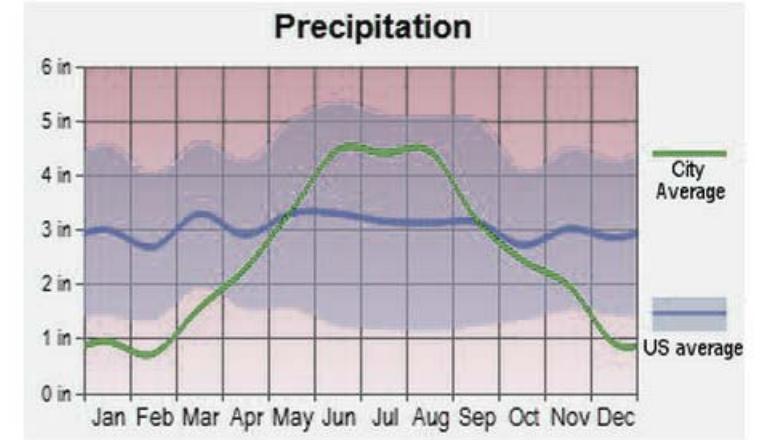


Figure 2.30 Climate (City-Data.com).

## SITE ANALYSIS | CLIMATE

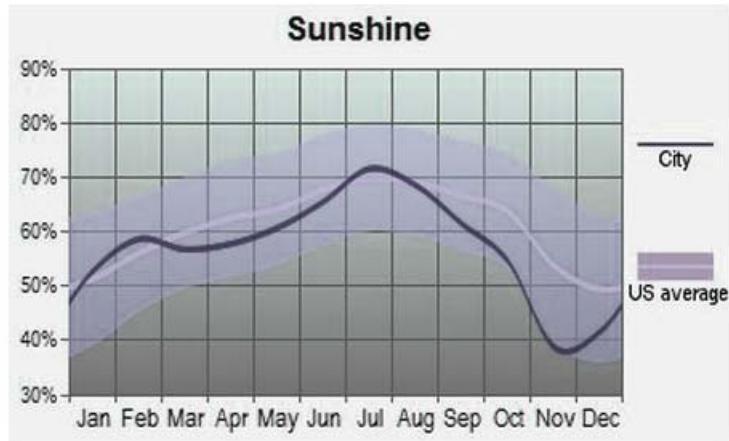
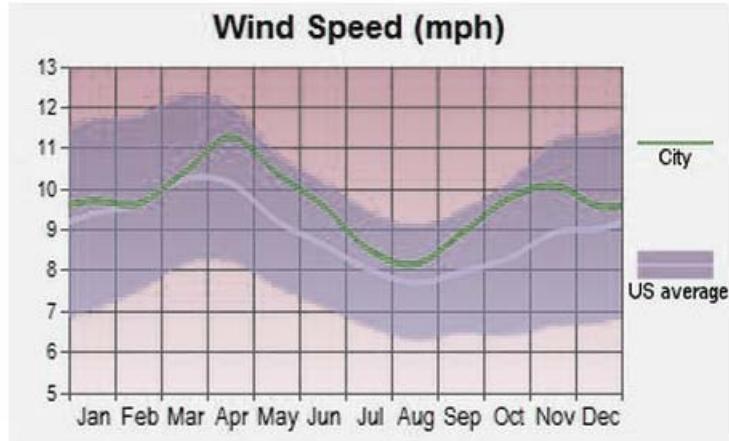


Figure 2.31 Climate (City-Data.com).

## SITE ANALYSIS | CLIMATE

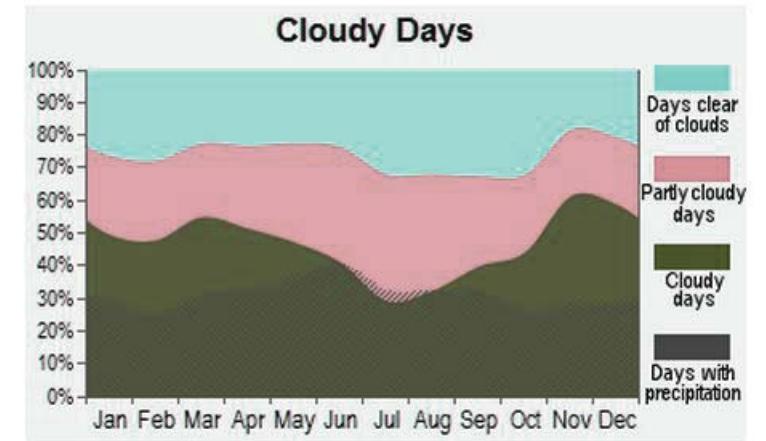


Figure 2.32 Climate (City-Data.com).

### Air Movement

The topography does not change the air movement on the site. The winds primarily come from the northwest and the southeast.

### Noise

The majority of the noise on the site comes from the traffic on Main Street. The other streets near the site are residential.

### Slope & Climate

Since the site is relatively flat, the slope does not effect the climate.

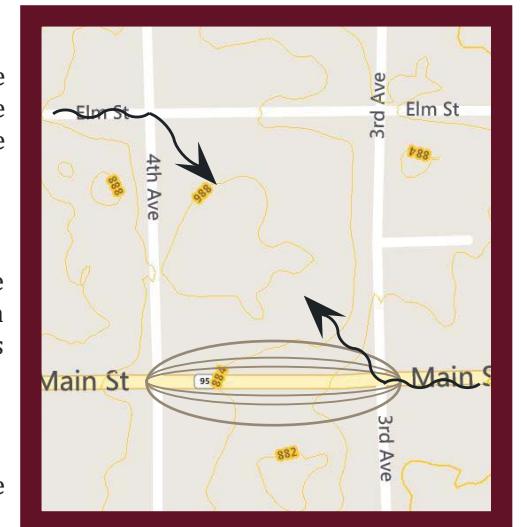


Figure 2.33 Air & Noise Graph.

# SITE ANALYSIS | CLIMATE

## Wind Rose Diagrams

### Monthly Wind Roses

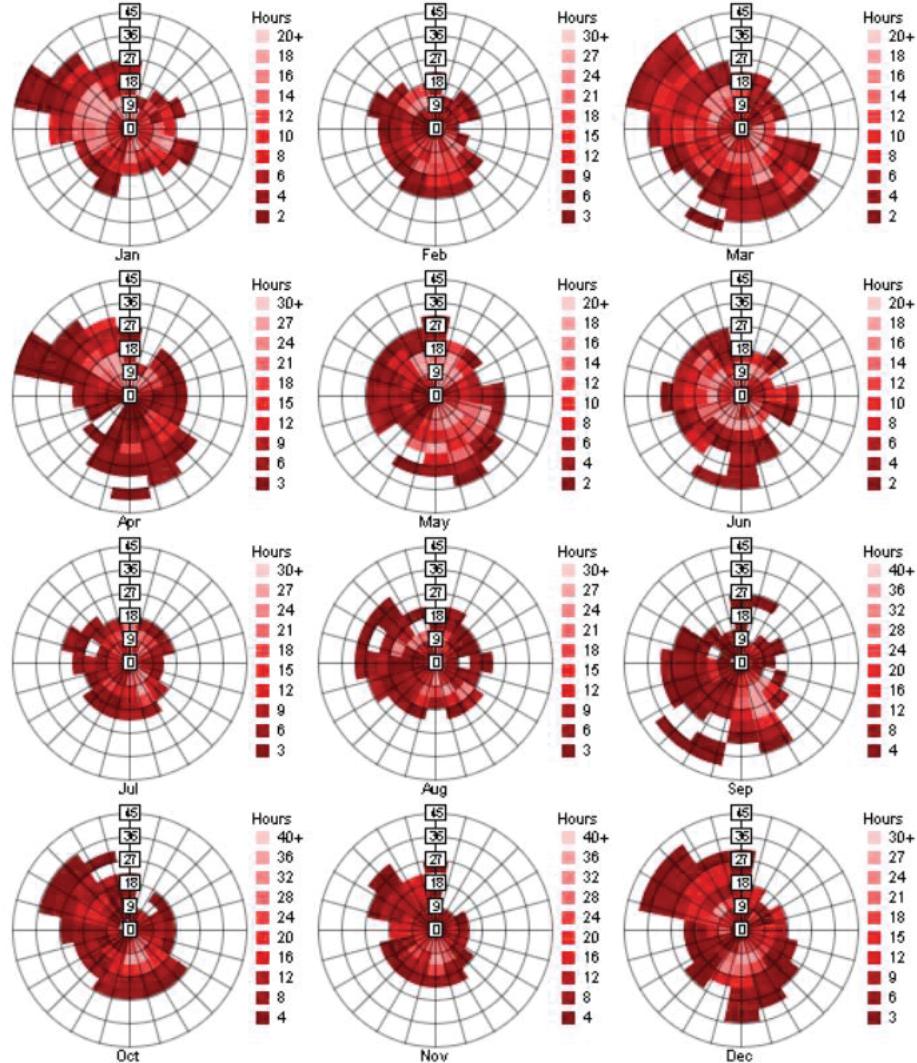


Figure 2.34 Windroses (Revit).

# SITE ANALYSIS | CLIMATE

## Annual Wind Rose

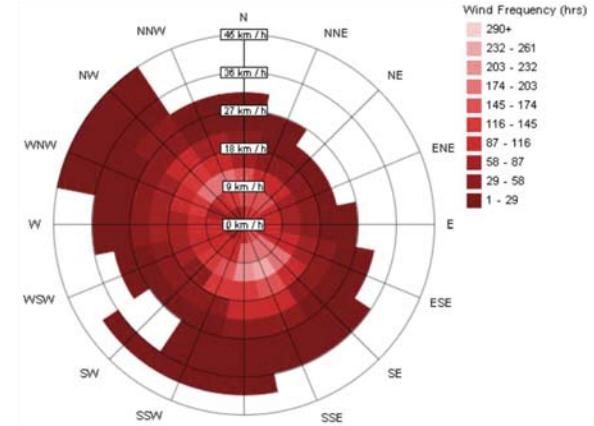


Figure 2.35 Windroses (Revit).

## Sun Path Diagram

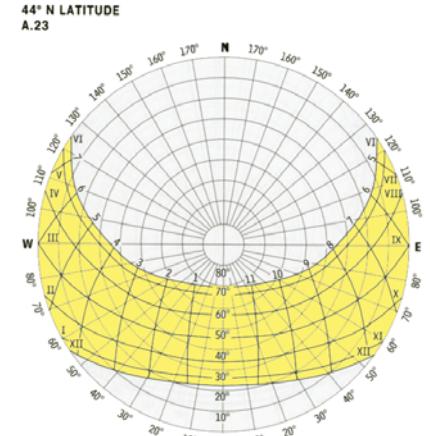


Figure 2.36 Sun Path (Lechner, 2009).

## Shading Chart

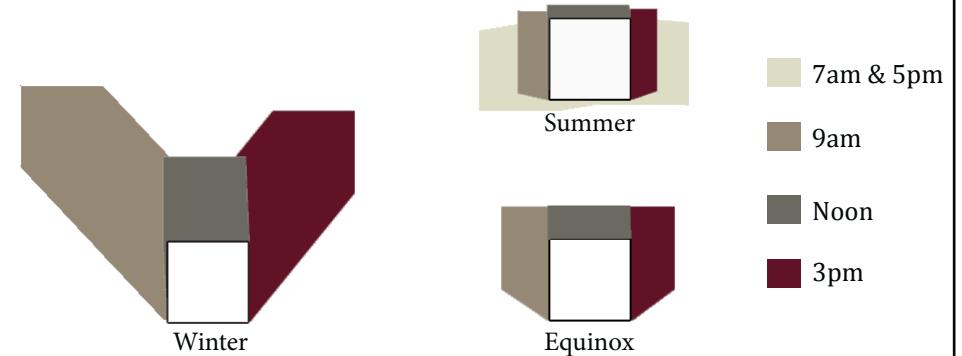


Figure 2.37 Shading (Lechner, 2009).

# FINAL BUILDING PROGRAM

## Spatial Allocation

ART SPACES	
Drawing Studio	900 sq. ft.
Painting Studio	1000 sq. ft.
Printmaking Studio	1000 sq. ft.
Sculpture Studio	1100 sq. ft.
Ceramics Studio	1400 sq. ft.
Photography Room	1000 sq. ft.
Woodworking Space	800 sq. ft.
18 Individual Studios	150 sq. ft. ea.
Storage	3000 sq. ft.
MUSIC SPACES	
Choir Room	1000 sq. ft.
Band Room	2000 sq. ft.
10 Music Practice Rooms	100 sq. ft. ea.
Recital Space	3500 sq. ft.
Technical Space	600 sq. ft.
Lab Space	600 sq. ft.
Instrument Storage	600 sq. ft.
THEATRE SPACES	
Performance Space	7500 sq. ft.
Rehearsal/Dance Studio	1000 sq. ft.
Wood Shop	1500 sq. ft.
Costume Shop	800 sq. ft.
Backstage Green Room	800 sq. ft.
Dressing & Makeup	800 sq. ft.
Scene Storage	1000 sq. ft.
Costume Storage	600 sq. ft.
Film Lab	700 sq. ft.
Technical Spaces	400 sq. ft.
Film Lab Space	500 sq. ft.
OTHER SPACES	
Lobby Space	6750 sq. ft.
Restrooms	2500 sq. ft.
Art Gallery	1000 sq. ft.
Restaurant Space	4000 sq. ft.
Rooftop Bar	1000 sq. ft.
Art Supplies Store	3500 sq. ft.
Administrative Space	900 sq. ft.
Sculpture Garden	3000 sq. ft.
Outdoor Performance Space	2000 sq. ft.
CIRCULATION	10,000 sq. ft.
TOTAL SQUARE FOOTAGE:	62,450 sq. ft.
SQUARE FOOTAGE OF SITE:	114,700 sq. ft.

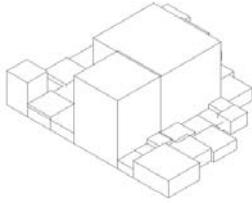




•◦●○SOLUTION○●◦•

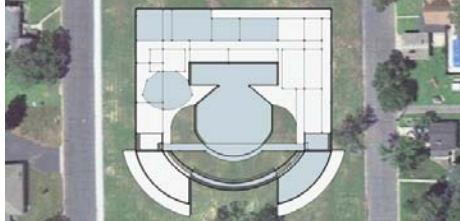
# PROCESS DOCUMENTATION

## WEEK 1 & 2



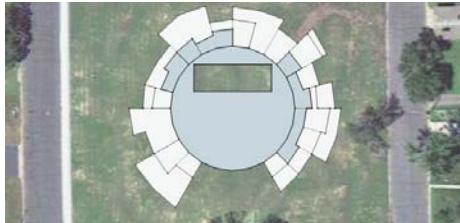
An initial spatial concept was created in the massing environment in Revit. Spaces were organized and site considerations were taken into account. I found a height restriction in the city code of 45 feet, which significantly changes my original design ideas and spatial planning.

## WEEK 3 & 4



The spatial organization was solidified and a form began to develop. After initial forms were lacking in creative inspiration, I began to study the work of Richard Meier and his way of proportioning. Began thinking about how to situate the building in the clearing like a jewel.

## WEEK 5 & 6



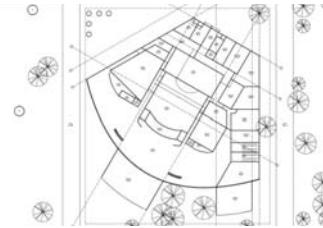
Interior spatial organization began to change as different iterations of forms were created based on suggestions from my classmates. Sustainable strategies were considered again. Think of different ways to allow daylight to penetrate deep into the building and locations outside of the building to view the sunset.

## WEEK 7 & 8



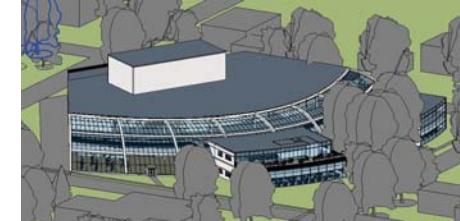
Egress was addressed in the auditoriums and the egress staircases. An initial HVAC system was chosen and studied. Building code was studied even further. Used sculptural ideas to further develop the form.

## WEEK 9 & 10



After midterm reviews, site context and scale was addressed in the design. The structural system became precast concrete due to the versatility of the system.

## WEEK 11 & 12



Structure, material palette, and HVAC systems were applied to the Revit model. A final building code check was completed. Windows were added to the building in a certain proportion.

## WEEK 13 & 14



The Revit model was completed and final design set in stone. Rendering locations were chosen to highlight the most important aspects of the design such as the south exterior perspective and interior perspectives. The boards were created using the images produced during this time period.

## WEEK 15 & 16



The physical presentation was plotted and set up for display. I continued to build the model and put together the oral presentation and digital display for the oral presentation. I began putting together the final thesis book submission.

# PROJECT SOLUTION DOCUMENTATION

## Presentation Boards & Physical Model



### MAIN STREET CENTER FOR VISUAL AND PERFORMING ART

Bringing the community of North Branch, Minnesota together to celebrate fine art...

**Existing Site**

The community of North Branch, Minnesota has a rich history of art. The town's location along the banks of the Mississippi River has provided a natural setting for artists and performers. The town's history is reflected in its architecture and its community's commitment to the arts. The town's location is a key factor in its development as a center for the visual and performing arts.

**Site**

The site is a high school site located on the corner of Main Street and 1st Avenue. The site is a prime location for the new building. The site is a prime location for the new building. The site is a prime location for the new building.

**Context Plan Concrete Structure**

**Mechanical Systems Diagram**

**Site Plan**

**Section 1**

**Section 2**

**Section 3**

**Section 4**

**Section 5**

**Section 6**

**Section 7**

**Section 8**

**Section 9**

**Section 10**

**Section 11**

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**Section 100**

**Sustainable Strategies**

**Design Details**

**Section 1**

**Section 2**

**Section 3**

**Section 4**

**Section 5**

**Section 6**

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# PERFORMANCE ANALYSIS

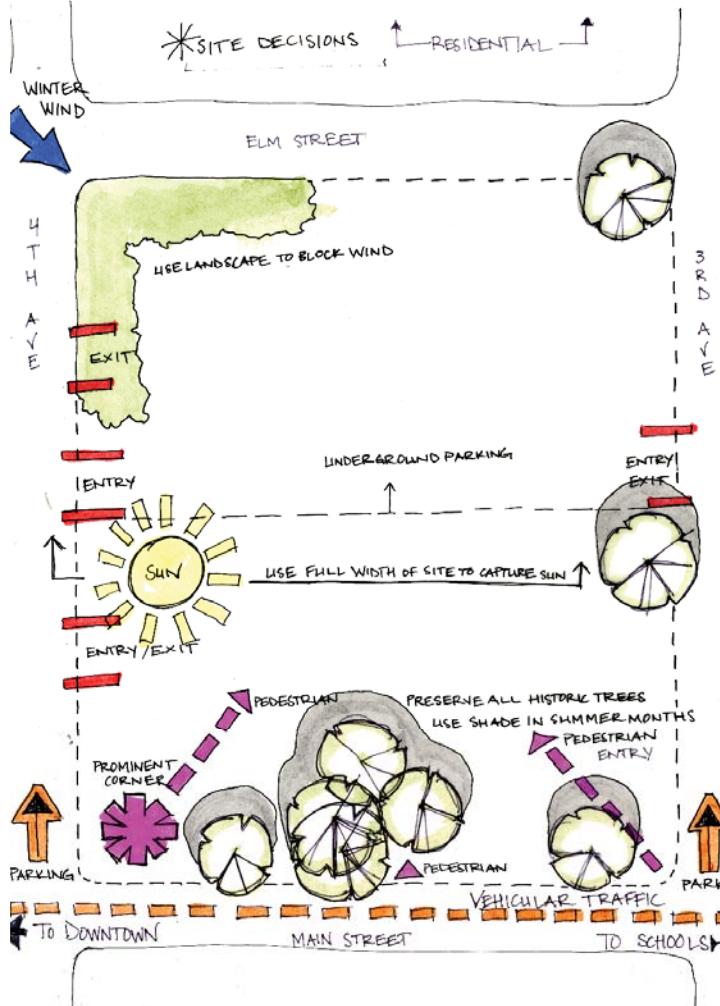
## Response to Site

The existing trees on the site were considered throughout the design process. I felt that it was important to preserve the trees because they were a major feature on the site and they have historic significance.

As demonstrated in the image to the right, the southern side of the site has many important features such as, the busy street front, historic trees, and southern sunlight. Special attention was given to the southern side of the design.

Parking will be located underground on the west side of the site to bring the traffic off the busy street to the south. Another commercial facility is located off of the west side street.

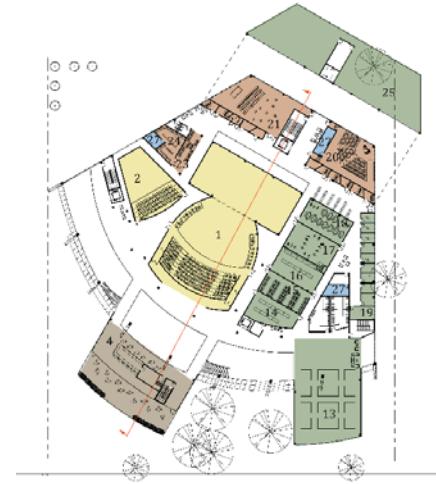
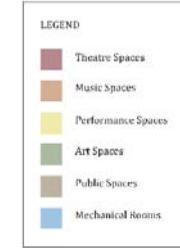
The height of the building was also a consideration because the surrounding buildings are homes.



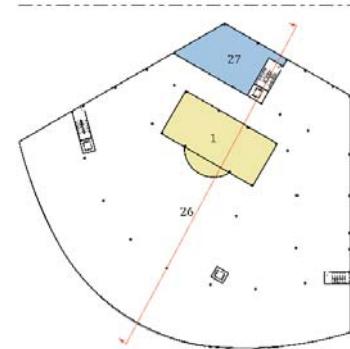
# PERFORMANCE ANALYSIS

## Response to Typological Research & Program

As noted by the color legend and floor plans, the spaces are arranged based on their uses. The arrangement of spaces closely matches the interaction matrix in the previous section of this book. The program is based on the case studies conducted.

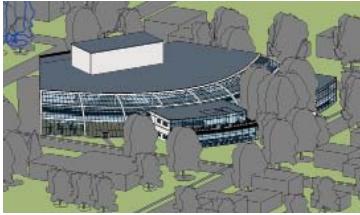


- 1 Theatre Space (670 Seats)
- 2 Ancillary Space (254 Seats)
- 3 Black Box Theatre (150 Seats)
- 4 Restaurant & Rooftop Bar
- 5 Fine Art Supplies Store
- 6 Ceramics Studio
- 7 Sculpture Studio
- 8 Wood Studio
- 9 Wood Shop
- 10 Storage
- 11 Dressing Rooms
- 12 Costume Shop
- 13 Art Gallery
- 14 Photography Studio
- 15 Art Lab
- 16 Printmaking Studio
- 17 Painting Studio
- 18 Drawing Studio
- 19 Private Art Studios
- 20 Choir Room
- 21 Band Room
- 22 Private Music Studios
- 23 Music Lab
- 24 Music Lockers
- 25 Sculpture Garden
- 26 Underground Parking
- 27 Mechanical Room



## PERFORMANCE ANALYSIS

### Response to Goals & Project Emphasis



Response to Goals:

**Academic Goal:**

My academic goal was to incorporate everything I have learned at North Dakota State University in one project. I feel that I have used everything I have learned, even though I was unable to fully develop each aspect of the project.

**Professional Goal:**

My professional goal was to develop a project that considers quality over quantity and examines many problems, including sustainability and community development. I feel that I have developed a project that benefits the community in every way and incorporates sustainable design in the early design phases.

**Personal Goal:**

My personal goal was to produce a project that I am proud of. After completing the project, I am proud of the building I have designed and proud to say that I have learned even more about architecture during the process.

Response to Project Emphasis:

**Fine Art Culture;**

The typology of a fine art center will naturally help create a greater fine art culture. The architecture also is designed to inspire people of the community as seen to the left.

**History of the Site**

The historic trees on the site have been carefully preserved and the use of the site remains open to the community.

**Sustainability**

Sustainable design strategies were thought of in the early design phase in the southern orientation and hemispherical shape. The facility easily qualifies for LEED Bronze accreditation.

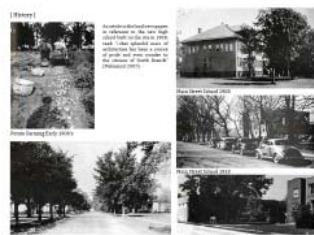
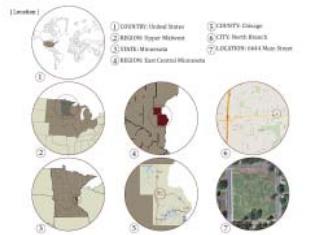
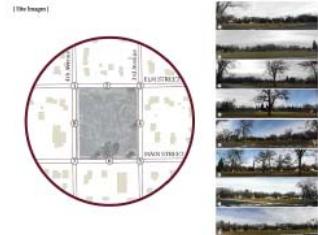
## PROJECT INSTALLATION

### An Image of the Physical Presentation



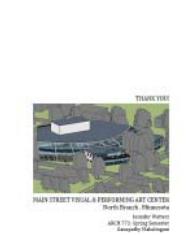
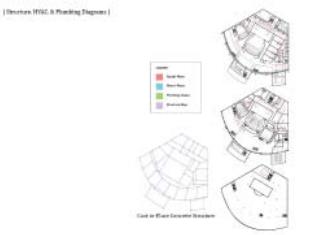
# DIGITAL PRESENTATION

## Presentation Slides



**Project Emphases**

- 1 **Show Arts Culture:** Showcase existing and emerging arts culture in the city and North Beach area. The building will be a hub for the arts and a place for the community to gather.
- 2 **History of the Site:** Connect the site to the history of the building and the city. The building will be a place for the community to learn about the history of the site and the city.
- 3 **Accessibility:** The building will be accessible to all people. The building will be a place for the community to gather and a place for the community to learn about the history of the site and the city.





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## PREVIOUS STUDIO EXPERIENCE



### ARCH 271: Design Studio I

Professor Rhet Fiskness

*"It's about the journey to the tea house."*

TEA HOUSE

Moorhead, MN



*"Inspiration taken from the Lake Street Bridge."*

BOAT HOUSE

Minneapolis, MN



### ARCH 272: Design Studio II

Professor Stephen Wischer

*"Fragility from dawn to dusk."*

TWIN HOUSE

Fargo, ND



*"A Baroque Contrapuntal Conservatory"*

CENTER FOR EARLY MUSIC

Fargo, ND



### ARCH 371: Design Studio III

Professor Mike Christenson

*"Exploring the possibilities of spatial organization."*

ASKANASE HALL RENOVATION

Fargo, ND



### ARCH 372: Design Studio IV

Professor Steve Martens

*"Uncovering the architecture like a fossil."*

FOSSIL CONSERVATORY

Marmath, ND



*"Discovering the connection between spaces."*

CURLING CLUB & GREEN HOUSE

Fargo, ND



### ARCH 471: Design Studio V

Professor Bakr Aly Ahmed

*"Bringing people together in the SOMA District."*

RENDEZ-VOUS TOWERS

San Francisco, CA



### ARCH 472: Design Studio VI

Professor Steve Martens

*"Historic Preservation and a new use."*

WOODROW WILSON SCHOOL ADAPTIVE REUSE

Fargo, ND



### ARCH 771: Advance Architectural Design

Professor Ganapathy Mahalingam

*"Analysis of energy & daylighting with renderings."*

GROAT POINT RESIDENCE

Medina, WA

**PERSONAL IDENTIFICATION**

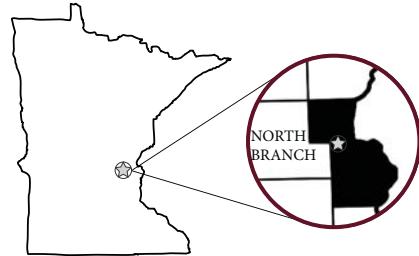
**JENNIFER A. WATTERS**

jennifer.ann.watters@gmail.com



5357 27th St S  
APT 108  
Fargo, ND 58104

651 357 7858



Hometown:

North Branch, MN

“North Dakota State  
University is my home  
away from home. It  
always will be.”

