heart of the community: the regeneration of lake george

building social capital with a new library for st. cloud

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The Regeneration of Lake George:
A New Library for St. Cloud

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

By

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In Partial Fulfillment of the Requirements
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Department Chair

Communities are defined by the people, places, and culture that surrounds them. In one community, St. Cloud, Minnesota, some of the places are in need if definition.

People need places to come together to define their culture and interact with each other and their surroundings. Humans are social creatures and therefore need to have a place where they can socialize.

One problem with today's society is that cultural boundaries exist. One group of people may not be able to socialize in the same manner that another group does. One place that people of all walks of life converge is the public library. Almost everyone has a need or a desire for information and learning. The library of today is an organism that is ever changing and responding to the needs of the users.

Currently in St. Cloud, a need exists for a new library because of a fast growing community and advancements in technology.

Yet another need the community has if for a new aquatic center. Previously, the city had a pool that was at one time one of the best in the state. Because of disrepair it has been closed for the past 3 years.

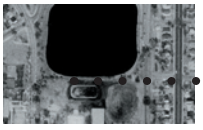
The city pool is another location where the community comes together. It is a place for people across all social strata to enjoy and frequent. The city also needs a new pool. The building that accompanied the old pool is a historic treasure to those who remember being there on a hot summer day. The building will stay and be reused to house those functions that need a roof.
St. Cloud will benefit from these two seperate yet similar in purpose buildings.

Together on the same site, the library and aquatic center will become a destination for all members of the community.

St. Cloud is located in central Minnesota, about one hour northwest of St. Paul. It is a growing community and along with its surrounding communities, it has a population of about 100,000. This surrounding population will also be utilizing these new spaces. Many communities rely on St. Cloud for many things including library facilities and other recreational needs.

As a child, I used this site, the land surrounding Lake George or Eastman Park, frequently as did my own parents as children. The Lake was used for activities ranging from paddle-boating, fishing, jogging, and rollerblading in the summer to ice skating, hockey and winter carnivals in the winter, among other things. Not long ago, the condition of the lake's water quality as well as the shoreline was disappointing. Storm water runoff and a large duck and goose population attributed to the poor water quality which killed marine life and prevented the water form freezing in the winter to allow for ice skating. In the spring of 2002, a joint conservation effort from the Stearns County Soil and Water Conservation District and the Central Minnesota Joint Powers Engineering Staff received funding from the DNR to restore the shoreline of Lake George with natural grasses and plants to reduce sediment runoff and restore natural beauty to the area. This effort will serve as a catalyst for my own project to further promote the area and to encourage water activities once again.

The Municipal Pool was once known as the best competitive swimming pool in the state after its completion in 1946. Two years ago the pool was forced to close after the surrounding neighborhood had to be evacuated because of a chlorine leak. The bill to repair was in the millions, so the city was forced to close the local landmark. The city currently does not have a public swimming pool, only select wading pools. These wading pools are great for smaller children but older children as well as teenagers should also be afforded a safe place to swim in the summer. Many high school age teens are using the county's Quarry Park, which is a reuse of old granite quarries. The problem with these areas of water is that they are relatively unsafe and often very deep. Many people have been injured when using these old mining pits as swimming pools. A new man made pool and aquatic center will be safer and more conveniently located.



The current public library in St. Cloud is located downtown across from the Civic Center. It seems like a good site in theory, but as of late many people have complained about the condition of the facility and the lack of adequate parking. The city has developed a planning commission to choose a future site for the new library. They cite the need for abundant parking and a growing inventory as a reason for the new library. The site that my project proposes coincidentally is on the city's list of eight possible sites.

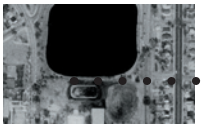
General Spatial Elements:

Library:

- Lobby, book return, information desk
- Reading room/Great Room
- Research center/assistance center
- Administration, in house and for the Great River Regional System
- Children's area
- Teen Area
- Adult area
- Documentation area
- Digital Media center
- Book store/Gift shop
- Offices
- Meeting rooms; public and private
- Mechanical/Electrical
- Support
- Restrooms
- Circulation
- Parking Ramp

Aquatic Center:

- Re-Use of current pool house
- Replacement of lap pool
- Zero depth entry pool
- Play equipment area for children
- Waterslide(s)
- Diving well



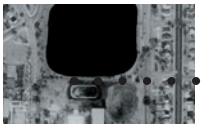
The incorporation of the two elements will also be a major design consideration.

Conceptual Underpinings:

This project will be understood, examined and developed from a sociological perspective. The importance of iconic or meaningful community buildings and their impact on culture will also be examined throughout the process. The major theme is regeneration of a site through meaningful building. Another major goal of the project is to "encourage encounters." This means that people will be encouraged to interact based on the design of the buildings. The main components of emphasis for this project will be adaptive re-use, library design, aquatic center design, and the sociological aspects of the convergence of two different typologies.

Library design for urban areas will be the emphasis for precedents. The site and parking issues will serve as a challenge. The city uses the current library for many functions and new functions will be included in the library program to incorporate elements from the site and the location of the high school.

The outdoor aquatic center will create a new place for people to gather and enjoy the area. The aquatic center will combine with the current structure to form a new center of recreation. The aquatic center will house many water features that modern aquatic centers now use.



Project Emphasis:

The main components of emphasis for this project will be adaptive re-use, library design, aquatic center design, and the sociological aspects of the convergence of two different typologies.

Investigation into the formation of building social capital will also be emphasized.

The historical pool building will be preserved and adaptively remodeled to capture its historic importance. Parts of the old pool structure such as pool tiles and hand rails will be reused in the new aquatic center to create a unified theme.

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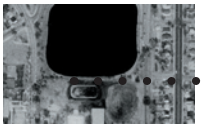
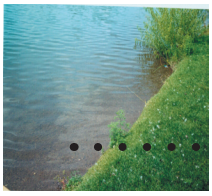
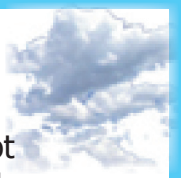


The Regeneration of Lake George will include the addition and relocation of the St. Cloud Public Library as well as the revision and addition to the current Municipal Pool in the form of an Outdoor Aquatic Center. The users will be anyone that resides in the are and visitors to the area who are interested in using the public library system. Users of the pool facility can be any resident or visitor of the city, which will mainly be used in warm months of the year. This project will be funded by a municipal bond that will also foresee the funding of the Civic Center Expansion. Maintenance and management of the Aquatic Center will be the St. Cloud Parks and Recreation Board. The Great River Regional Library system will maintain and manage the St. Cloud public Library as they are the managerial entity that maintains the current library. The city will be the main client of the two projects.

The library will have typical business hours that will start at 9:00 a.m. and end at 10:00 p.m. to accommodate students and other users that need longer hours. Personnel will include the branch administrators, other management staff and their support staff. Hourly workers will post the circulation desks and media center as well as the help centers. These might be students working for work study programs from college or high school because of the proximity to both the St. Cloud Technical High School and St. Cloud State University.

The aquatic center will be staffed by a center coordinator who will manage the activities of the center. Lifeguards will be on duty at all times and will range in age. Because of the nature of an aquatic center, the hours will vary with users. Swim clubs and competitions may have special hours and may also require parts of the center to be closed from public use. Open swim hours will range daily because of this. For the most part the center should be open to public use from 9:00 a.m. to 8:00 p.m. or later depending on hourly usage and of course



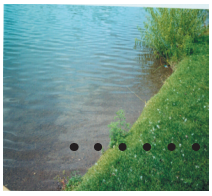


weather conditions.

Parking in this area will be a concern. A lot currently exists but will be removed to make way for this center. An adequate ramp will be built in connection with the Library and the two functions may share this ramp for public use. The intention is to keep the ramp affordable but a fee will be charged to help buffer some of the costs. Visitors will be encouraged to frequent both facilities, especially the aquatic center.

According to the needs assesment formulated by Meyer, Sherer an Rockcastle for the Great River Regional Library, the main library in St. Cloud will serve over 75,000 people in the year 2020. This represents a 35% increase in population from 2000. Also, St. Cloud is the fastest growing area outside the metropolitan area.

The increase in reader seats should be from 177 at the current location to 496 in the new library.



The project will be based on precedents that have been researched in the case study section of this document. Conclusions have been made based on the case studies as to what elements from each should be further developed as the design progresses. Some of these major elements that came up frequently are the concept of the "living room" for the library. Other concepts for the library are sustainable concepts including day lighting – direct and indirect. Water elements will help incorporate the site in harmony with other water features on the site including the lake and the aquatic center. Much of the basis for the design will be guided by sustainability and responding to the site. The other major guide for design will come from sociological perspectives and examples of iconic and idyllic buildings and how they shape the culture of that area.

The deisgn of this project will be mostly guided by my own intentions and curiosities about the importance of building social capital. Social capital are the things that give a certain culture or place their worth.

The things that constitute social capital are varied and this project will investigate the impact social centers have on a certain culutre or society.

To some, social capital is defined by the landmarks that the particular city may or may not contain. These being museums, opera houses, architecture, concert halls, parks, plazas, and even iconic buildings. While some may argue that these are places that build social capital, one may also argue that the abundance of social capital built those physical things. But what about those people who are very much a part of a community but may not have the money, interest or time to attend the opera? Does this mean he or she doesn't contribute to the social capital of a community? I think that social capital is more than the physical.

According to some sources, social capital is more about the organizations in a community such as church groups, Parent Teacher Associations, and other clubs and groups that gather for a common goal. Today, many of these types of organizations are declining in their participation. There are many explanations for this. One is that people today take on so many things in their daily lives. Many people work well over forty hour work weeks and nearly all families have both parents working as well leaving little time for outside activities.

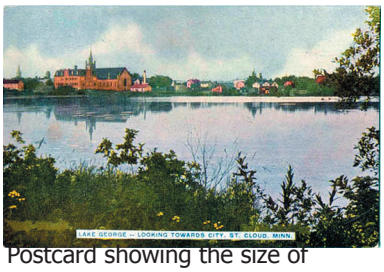
Of course the commodity of time is one that everyone can use more of. But if a person really wants to go somewhere or do something important to them, they will most likely find a way. By creating a place of destination for all citizens, many of them will encounter others who have the many attributes to contribute to each other, therefore encouraging encounters. By encountering each other, people will seek out and create their own social capital. The new community center for St. Cloud will do just that.

Some of the ways the conclusions will be illustrated include perspectives, plans, elevations, sections, models, writings, and other mediums that will help reach a conclusion about the importance of building social capital and if physical structures really do build social capital.

One of the most important factors that will also be driving the design of this project will be the use of the Leadership in Energy and Environmental Design, or LEED guidelines. The sustainability of this project as well as all new buildings need to adhere to certain standards of design that will help protect the users, the environment and the earth in general.

site analysis introduction

The site itself generated the project, so the site selection was based on existing elements located in St. Cloud. The site is located in St. Cloud, Minnesota. St. Cloud is in the center of Minnesota and lies about 70 miles northwest of the capital city of Minnesota, St. Paul and also the large urban center of the Twin Cities. The region is the upper Midwest and borders Wisconsin, Iowa, North and South Dakota, and Canada to the north. The Lake George area is located downtown St. Cloud just south of the main downtown area. It's boundaries include Highway 23 or Division Street, a major artery, to the north, 12th Avenue to the west, 9th Avenue to the east, and 7th Street to the south. With the exception for Division street, middle density residential lines these streets and avenues. The homes located around the area are older homes from the early 1900's to 1940's. To the west is St. Cloud Technical High School, the first public high school in St. Cloud.



Postcard showing the size of the lake in the early part of the century with St. Mary's Cathedral in the background

A postcard showing a granite quarry pit in the St. Cloud area.

The history of the area is quite unique but also coincides with the general history of the Midwest when pioneers discovered the plentiful farmland that occupied our area. A Protestant Yankee by the name of John Wilson was one of the first settlers and is attributed to naming the town. Steamboats on the Mississippi first arrived from Minneapolis, then known as St. Anthony's Falls around the 1850's. Steamboat trade was the biggest industry that formed the city as well as the logging boom that fueled the sawmills of towns all along the river and down into the Twin Cities. The Mississippi river was a major source of industry and population growth as it made travel possible and also powered sawmills and other factories. From 1890 to 1950 the population quadrupled in size, and was 29,000 in the latter. According to the U.S. 2000 Census, the population that year was 46,710. The metropolitan area with the surrounding communities of Sauk Rapids, Sartell, Waite Park, St. Augusta and St. Joseph comprise a larger population in the 100,000's.
Major industry includes mainly the health care

system. Centracare corporation is home to a majority of St. Cloud's workers. Healthcare makes up 24.1% of the occupations, while 19% is retail trade. The median household income is $38,920. There are 92% whites living in St. Cloud, 1.8% are African American or Black, an 1.2 % are Hispanic. The remaining makeup is many different types of minorities.

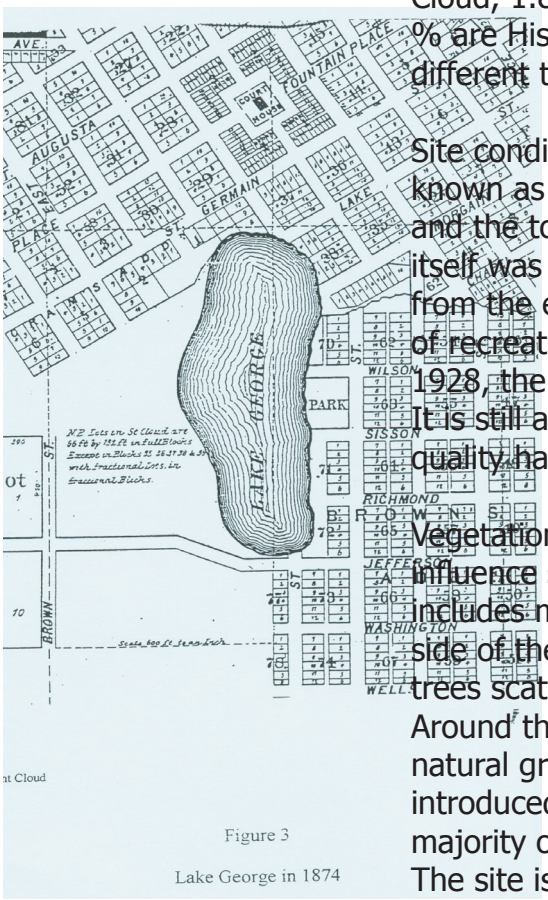


Figure 3

Lake George in 1874

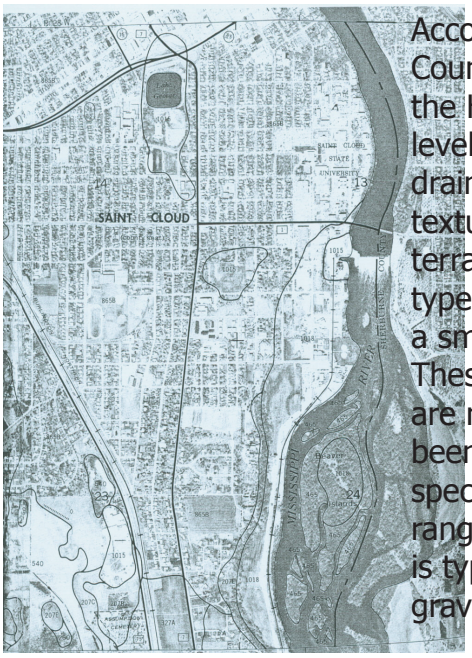
Map from 1874 showing the size of Lake George which appears to be three times its current size.

Site conditions include a large water feature known as Lake George. It comprises 9 acres and the total park site is 25.65 acres. The lake itself was once much larger according to maps from the early 1900's. It has been a large part of recreation in the city since the beginning. In 1928, the lake was recorded to be 30 feet deep. It is still at that depth today, although water quality has deteriorated.

Vegetation has been dominated by human influence since the parks dedication in 1906. This includes many mature oaks on the south and east side of the site. There are also many coniferous trees scattered around the perimeter of the site. Around the lake and a demonstration pond are natural grasses and flowers that have been re-introduced by the conservation committee. The majority of the site is covered with mowed grass. The site is also very flat. It is in a low lying area with some hilly landscapes around the outlying areas.

Standing structures include mainly the Municipal Pool and the attached Pool house. Also on the East side of the lake is the old warming house used for storing ice skates and concessions in the winter, as well as a picnic shelter on the extreme Northeast corner of the site. Wind speeds are relatively low on average. The yearly average is 8.3 miles per hour. Winter winds generally come from the North West and summer winds tend to come from the south. Soils in Stearns county consist of 14 different types. This area is comprised of mostly glacial till, outwash plain, and

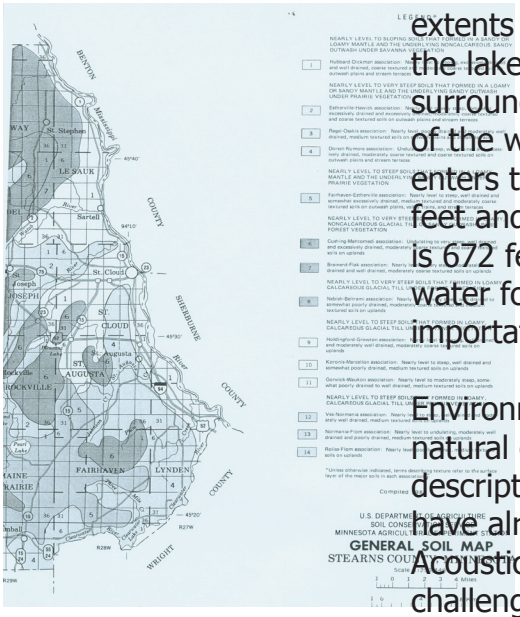
St. Croix Morraine.



Soils map showing the St. Cloud metro area. Lake George is located in the top center.

According to the USDA soil survey for Stearns County the site is part of a large area of soil called the Hubbard Dickman association. This is nearly level to sloping, excessively drained and well drained, coarse textured an moderately coarse textured soils on outwash plains and stream terraces. Within this larger association is the soil type that surrounds the lake and the site. It is a small area and this type is called Psamments. These areas have the qualities listed above and are made up of sandy soil materials that have been excavated or filled to prepare a site for a specific use. The areas are irregular in shape and range in size from 3 to 20 acres. The soil material is typically loamy sand or sand and sometimes gravelly.

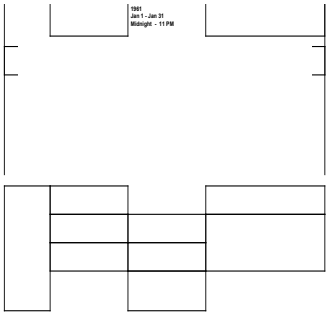
At the shoreline around the lake, the elevation is at 1020 feet above sea level. At the south end of the site, the elevation rises to 1030 feet above sea level. The contours again rise at the extents to another ten feet. This slope towards the lake contributes to water drainage from the surrounding area. In major rain events, the level of the water can rise because storm drain runoff enters the lake. The shoreline perimeter is 2,165 feet and its length is 722 feet and its breadth is 672 feet. This is a relatively small body of water for the area standards but it serves as an importatnt one.



Soils map for the Eastern side of Stearns county.

Environmental issues include the re-introduction of natural grasses and plants discussed in the project description section. Preserving what steps have already been taken will also be important. Acoustically, this site will be somewhat of a challenge. The major concern is the high traffic that is constant throughout the day on Division Street and 9th Avenue South. These two areas are main arteries in the city. Although being at the site is relatively quiet.

wind rose data for St. Cloud



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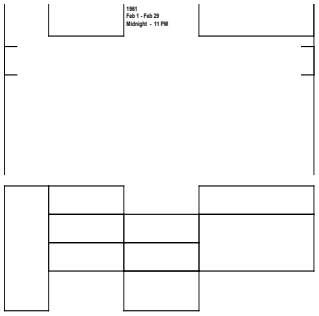

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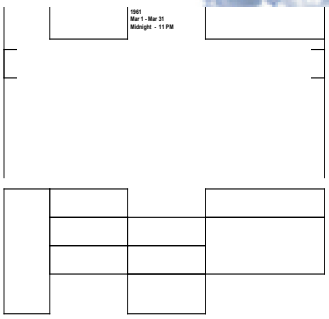

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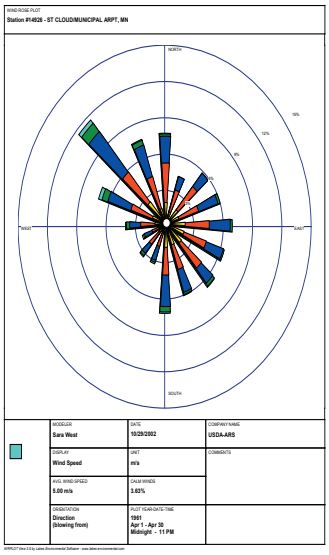

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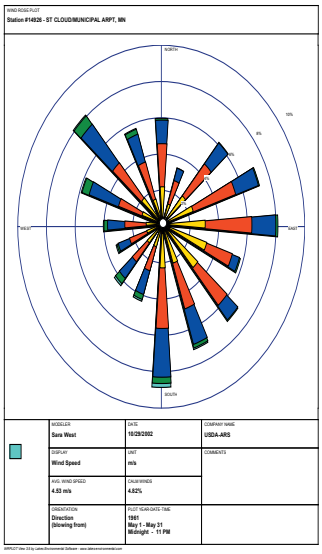

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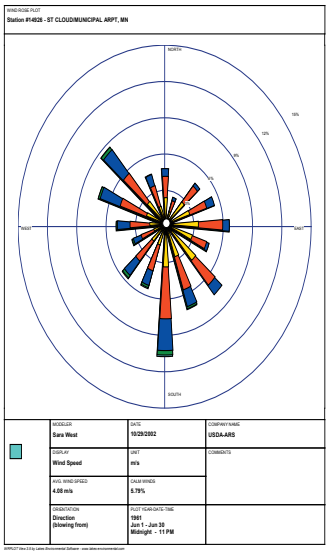

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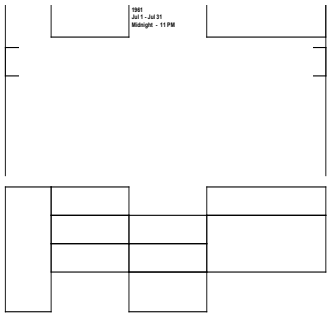

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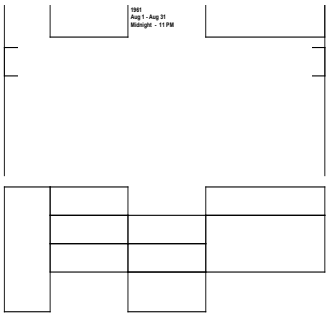

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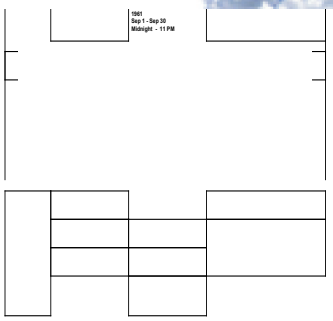
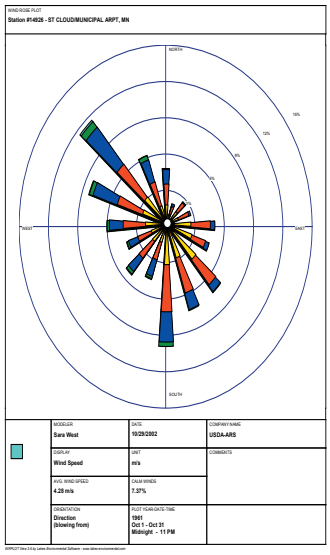


September



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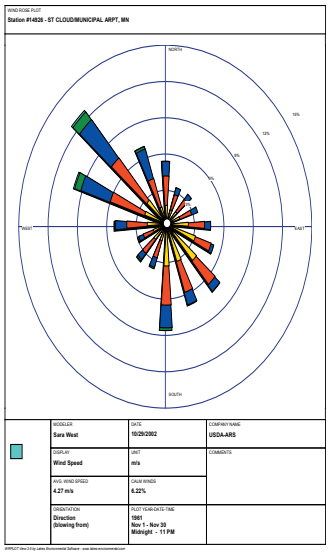

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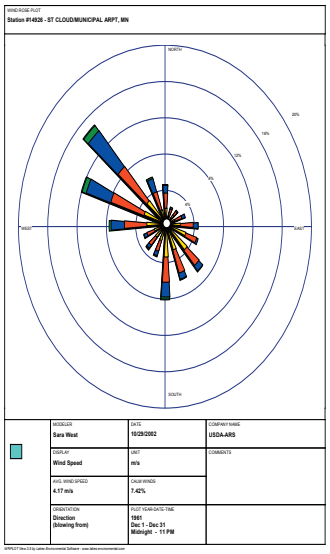


December

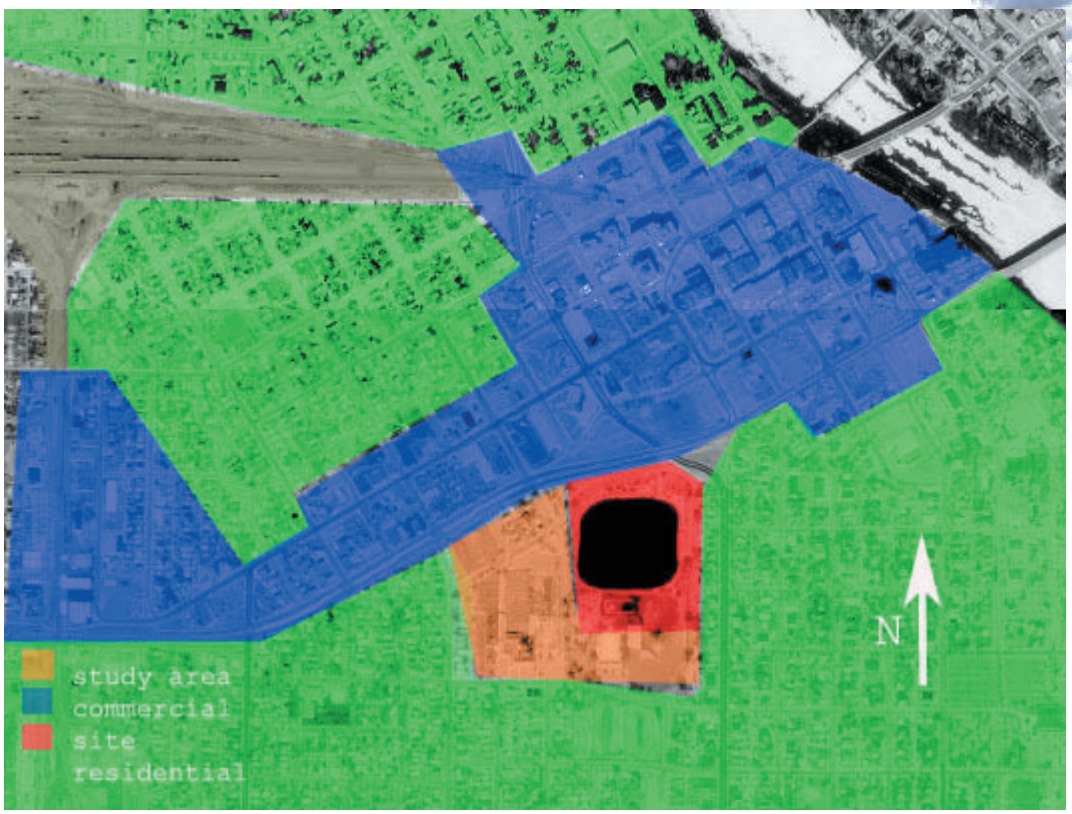
Wind Rose Analysis

Based on the wind roses for each month the following should be taken into consideration.

January, February, and March see the most winds coming from the North West. Design measures should include wind blocking and avoiding doors and openings that face the North or North West to prevent cold winter winds that create uncomfortable temperatures for human use.

May also sees a wide variety of wind direction and speed. From May to October, much of the wind comes from the South. Warm summer winds should be capitalized for natural ventilation purposes. With the large open area on the site to the East, these winds may be stronger. The lake although small, can also effect the microclimate winds.

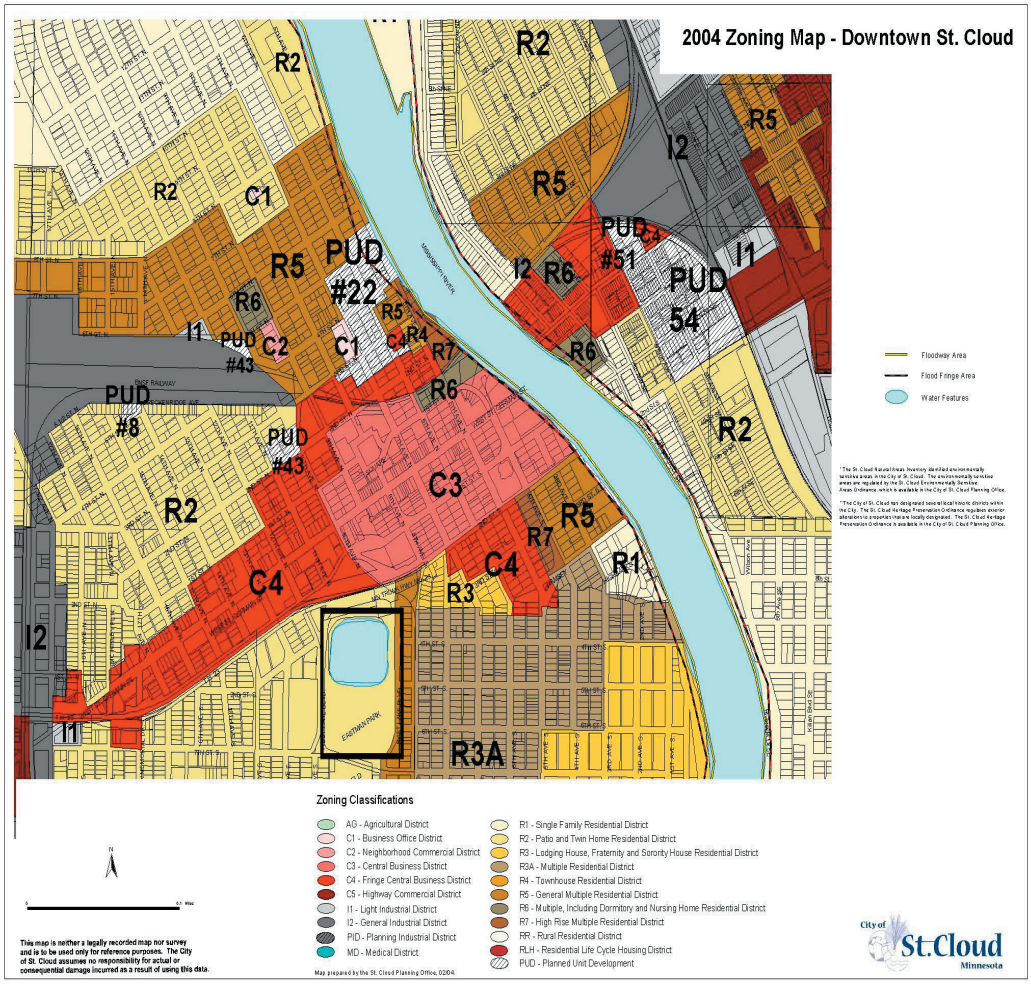
The site is generally protected from large open areas. To the South is the large high school building, and to the North is a elevated area with houses and ample trees. The West is open to winds so this direction should be taken into consideration as well.



The map above is an aerial photo taken in 1991. The map shows the lake in the middle of the site being the black circle. Surrounding the lake is the immediate park and the campus of the St. Cloud Tech high school. The Green area is illustrating the residential zones of the area. The Blue shows the main commercial and business zones. The brown area at the top left is the main railroad transfer yard.

The white area in the top right is the Mississippi River. A large divider of these areas is Highway 23 or Division Street. It runs diagonally East and West through the site. To the North of is is mainly a business district while to the South of the street is mainly residential. The Lake George Area is located immediately South of Division Street.

Traffic analysis map shows the roads that will have a direct impact on the site. Major traffic is to the North on Highway 23. This area will be the area with the most noise on the site.



The map above is from the City of St. Cloud Planning Department. The area highlighted by the black square is the site. Looking at the map, the area surrounding the site is zoned R-2, Patio and Twin home Residential District. The Park is identified as a park on this map. The major commercial district is located to the north. The area labeled C-3 is the Major Commerical District and the area labeled C-4 is labeled Fringe Commercial District.

site photos

View of the South East corner looking to the West. This parking lot is the proposed site of the library. It is currently used by high school students.

This view shows the South West corner of the site. This is also the view of the parking lot of where the library will be located. A small corner of the pool building is also seen on the left. This street is mainly residential and is quiet thoughout the day except when school lets out.

Looking East at the pool building from the high school. This street is also very quiet during the day and non-shool days. Busy times will be before and after school only.

Looking West at the site for the library. The high school can be seen in the background as well as the pool building.

Looking North below the pool area. This area is used for a skating rink in the winter. This is a possible area for Library spaces including outdoor areas that connect to the pool area, as well as space for the aquatic center.

This view is on the opposite side of the lake from the above picture. This area is a small parking lot with a picnic shelter on the left side of the photo. This are will be un-developed but important for the project.

This view is also looking South East from the North end of the site. Signs like this one warn visitors to not feed the geese or ducks because of overpopulation and dropping problems.

This building serves as the park shelter. It was once used as a warming house, concession stand, and rental office. It sits empty and un-used today. It is located on the East side of the lake.

This view looks towards downtown St. Cloud. It is taken in front of the shelter building from the above picture. Note that paddle boating is no longer commencing.

This picture shows a sandy area along the South East shore. Also in view are the natural grasses and native plants that have been reintroduced along the perimeter of the shore line. The sign says that swimming is not allowed.

This is the South elevation of the pool building. It is currently not in use. This building is located on the South West end of the site.

This is the pool today. Empty. The back of the building can also be seen. The pool will have to be replaced but the building will remain with additions and repairs. It has a simple layout, but it lasted for over 50 years just this way.

This is looking into the pool from the fence that surrounded the area. The area in the foreground was the concession area.

This picture shows the area adjacent to the pool building to the West. In the backroun is a playgroud and park area. The area has mature oaks and coniferous trees that provide ample shade in the summer for the pool area.

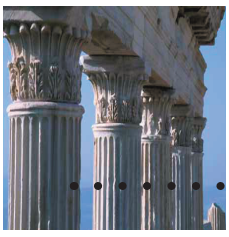
case studies introduction

The following is a compilation of case studies that relate to the project. They mostly include library case studies because libraries are complicated entities that require careful consideration to be successful. For the aquatic center, the case study presented is very clear and concise and serves as a great example for the aquatic center element.

Other research into case studies was accomplished by viewing city recreation centers. Most communities today have swimming pools or aquatic centers that are available for public use at a minimal fee. These aquatic centers were found to have many of the same elements.

Aquatic Center examples:

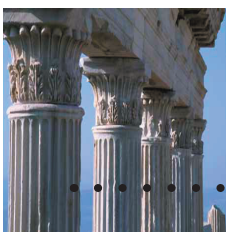
This is the Apple Valley Community Center located in Apple Valley Minnesota. This is a relatively large center compared to the size of the proposed St. Cloud Aquatic Center. Some elements include: Childrens Area, Wave Pool, Water slides, Lazy River, Concessions, Zero Depth entry area, large shade areas, and locker/restroom facilites.



This is the site plan for the Groveport Recreation Center in Groveport, Ohio. The size for this center is comparable to the proposed Aquatic Center for St. Cloud. Features include: competition pool, zero depth entry, lazy river, water slides, children's play area, concessions and restroom/locker facilities.

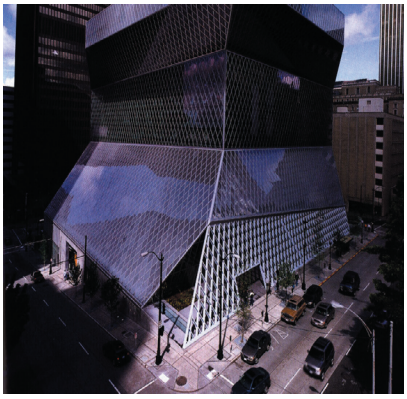
The Ballwin Aquatic Center in Ballwin, Missouri is shown above. This center features many ammenities that modern aquatic facilities today include. The goal for Ballwin was to create a place for the community to gather, to create an important yet fun space to be in.

The aquatic center should be a place that all people feel comfortable using and should be accessible to all. The aquatic center should encourage fun and create good memories that create a desire in users to return again and again. The restrooms and locker rooms should be located in a central location as well as appropriate and shaded places for lifeguards and other staff.



Seattle Public Library, Seattle Washington

Architect: Rem Koolhas with OMA
Square Feet: 363,000



Outside view of the Seattle Library.

The Seattle Library created a new movement in library design. The unifying idea behind the design according to Koolhas was to say that "the modern library, especially in a cybercity such as Seattle, must transform itself into an information storehouse aggressively orchestrating the coexistence of all available technologies" (Olson). The design team also wanted to group similar functions but at the same time create a separate feel to each function.

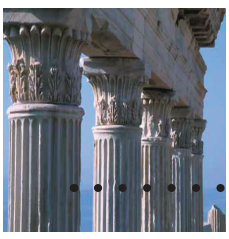
There were five major programmatic elements called platforms which are "blocks of floors designed for a unique purpose: parking, staff area, meeting rooms, books, and offices" (Olson).

Two interior views of the Seattle Library.

Focus was put on budget especially being a public project. OMA was chosen for this project mainly because of their track record of staying within the set range for budget. The structure and look of the building are also highly unique with a completely transparent skin and modulating shapes. A relatively simple material palette was also chosen. An emphasis seems to have been put on letting the daylight be the focus for most areas.

Main programmatic areas are:

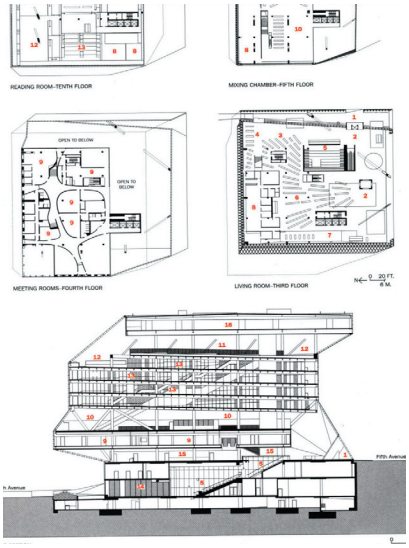
1. Arcade	2. Reception
3. Coffee Cart	4. Shop
5. Auditorium	6. Fiction
7. Teen Center	8. Office
9. Meeting	10. Mixing Chamber
11. Closed Stacks	12. Reading terrace
13. Book Spiral	14. Children's Area
15. Living Room	16. Headquarters



Analysis:

Based on this article, the Seattle Library has been welcomed with praise all around. It has a unique building form and shape and the views from the inside are the main strength of its design. The openness of the plan is also a main attribute. The design and program encourage the public to get excited about libraries. The program itself is quite a bit larger than the one required for the St. Cloud library. Some of the main concepts translate including:

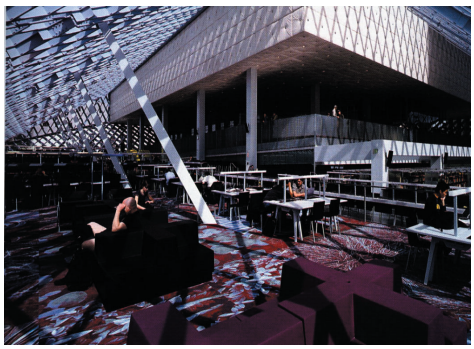
- the emphasis on day lighting
- the concept of the "living room" as a public encounter
- the "mixing chamber" which emphasizes research and assistance
- the idea of the library as a public destination

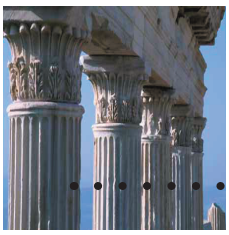


Two plans and section of the Seattle Library. The section shows how complex yet dynamic the circulation winds through the building.

Social Needs Analysis:

The Seattle Library is a community based project that encourages users to frequent the building. It will definitely become a destination for people becasue of its unusual shape based on the context. The driving force behind this deisgn seems to be the circulation inside the building. Also, a sense of transparency is very evident based on internal images. Some people have a notion that libraries are supposed to be classical in nature and represent the diginity of the functions that occur inside. In the case of the Seattle library, the shape is very non-traditional. But it creates a unique sense of place for the users.



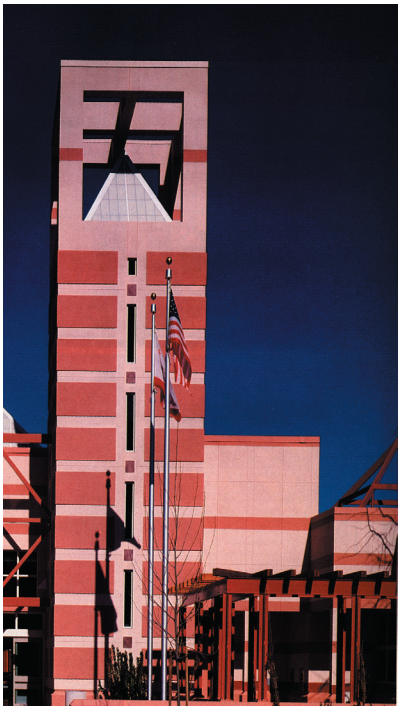


Albany Library and Community Center: Albany, California

Architect: Marquis Associates
Square Feet: 12,000 (library)

The go-ahead for a new civic building for Albany came in 1989 after an advisory committee commissioned Marquis to design a dual purpose building to serve community functions beyond just the library. The library includes conference rooms, children's area, and computer rooms.

One challenge with the site is the location to a large residential neighborhood. The site is also nearby a train station and had to remain accessible to it but also reduce noise. The design includes computer controlled HVAC and white noise cancellation techniques.

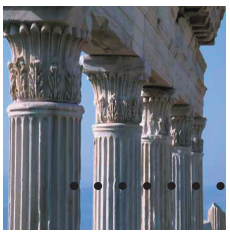


The entrance for the Albany Library and Community Center is very iconic. It visually divides the two functions.

Some program highlights include an outdoor courtyard entrance, a central lobby that "serves as a fulcrum for the building's different functions. Warm, simple materials were used inside and out. Wood floors are used in the community center's multi-purpose room. Skylights were also used to achieve maximum daylight. The lobby also doubles as a gallery space for local art.

Main programmatic areas are:

1. entrance lobby
2. library lobby
3. staff area
4. library
5. community center library
6. multi-purpose room
7. kitchen
8. meeting/classroom
9. lounge
10. basement



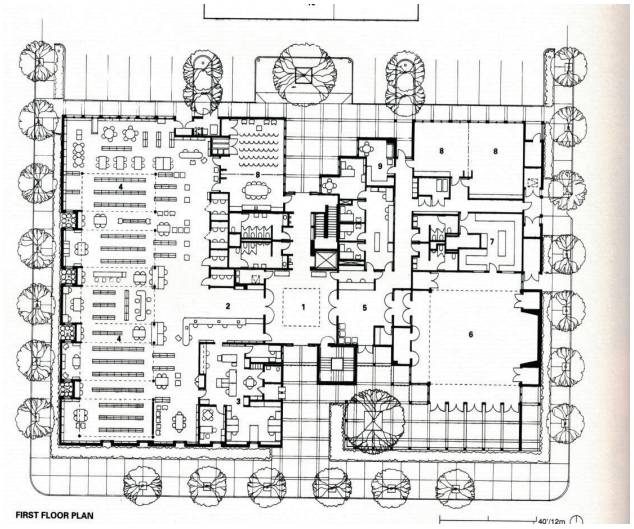
Analysis:

This building houses some great ideas about bringing community together. The dual function building serves a good purpose for this community. The program is smaller than the ideal program for the St. Cloud Library. Noise reduction factors are also important here. One problem here is the little opportunity for growth and redesign. Translatable concepts:

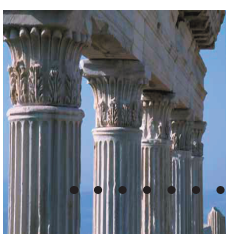
- emphasis on energy conservation
- easily identifiable and accessible to citizens at street level
- located in residential area

Social Needs Analysis:

This building has an iconic tower to identify its presence. This creates a sense of place becuase the tower will be a feature that users will remember in their experience of the entry sequence. This building also has a very govenmental or civi feel to it. Some people may identify better with a civic building when it is a public entity, while others may find the opposite more inviting. Just because a project is civically funded and run doesn't mean it neccesarily has to look it.

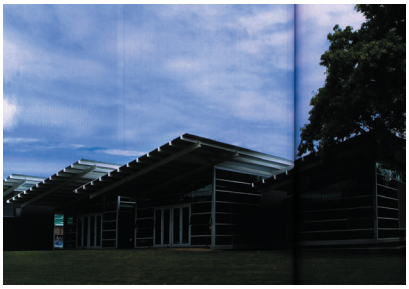


Floor Plan for the Albany Library and Community Center. The West side of the plan is the Library.



Christchurch South Library: Christchurch, New Zealand

Architect: Warren and Mahoney
Size: 2500 square meters



Front view of the Library. The exterior is divided into sections that have angled roofs to allow for natural daylighting and ventilation.

The largest library in Christchurch, the South library combines library and civic functions for meetings of city council and other groups. According to the architect, this library is "far from the quiet, serious book repositories of the recent past, the contemporary library is now an extension of the private living room" (Lochhead).

The project was "developed as four interconnected floor plans each sheltered by a light steel roof extending at the ends over external reading rooms. The external decks, surrounded by a shallow moat, are set in a shaded landscape of lawn and mature trees. The water and moat serves also to secure the premises, deliberately blurring the lines between private and public space" (Lochhead).

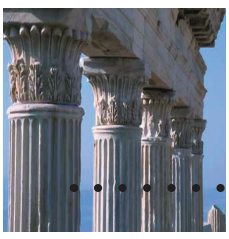
Two interior views. The one above is the main circulation area, and the one below is a reading space showing the ample daylighting and a partial view of the moats that help cool the building.

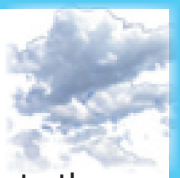
The project also extensively uses sustainable methods of design. These include a water chilled floor slab, highly insulated thermally massive design, integrated external sun shading, storm water retention and filtration, rainwater collection and recycling, use of recycled materials, high performance glazing systems, and automated natural ventilation and lighting control. (Lochhead)

Materials used include natural local stone and corrugated steel roof. Interiors include wood flooring and recycled carpet.

Main programmatic areas are:

1. moat	2. meeting room
3. staff room	4. entry lobby
5. library workroom	6. office
7. boardroom	8. security
9. library services	10. learning area
11. café	12. library collections





Analysis:

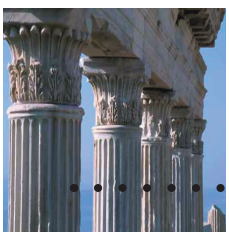
This case study is one of the most valuable to the project. The underlying theme behind it is the idea of the private living room and blurring the lines between the expected spaces one thinks of in a library. This concept was also used in the Seattle Library. The integration of sustainable materials and designs into this building were extremely successful. The cooling effect of the moat as well as the aesthetics it provides are very valuable. The site is also ideal for this kind of project as it allows for opportunities such as the natural vegetation and space for a one level plan. The floor plan is arranged openly with four major long elements that when they overlap they form circulation space. The plan is on the east-west axis to maximize daylight. The mechanical room is in a separate space off the south east corner which keeps functions separate. Although this building is in a different climate, the idea of a sustainable library is intriguing. Using thermal mass and water features to cool the space are highly effective.

Translatable concepts:

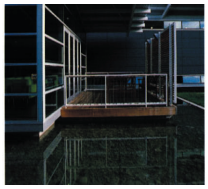
- water features for cooling
- thermal mass for heating
- cross ventilation and attention to climatic details
- gray and storm water re-use
- ability to open window and enjoy fresh air
- "Living room" idea of community and open ness
- long and lean floor plan

Social Needs Analysis:

This library is a great example of responding to social needs. Most importantly it is one of the best examples of creating a sense of place. The sense of designed perception and forcing certain experiences albeit quality experiences is successful. The environment is dynamic



because of the close connections to the outside surroundings. This library is more than a book depository in that the investments and time taken into considering sustainability will be valuable for many years to come. It also serves as a great example for its users at how sustainable designs can be successful. The ulitmate consideration for human comfort is creating places that will keep humans comfortable and able to experience resources hundred of years into the future.

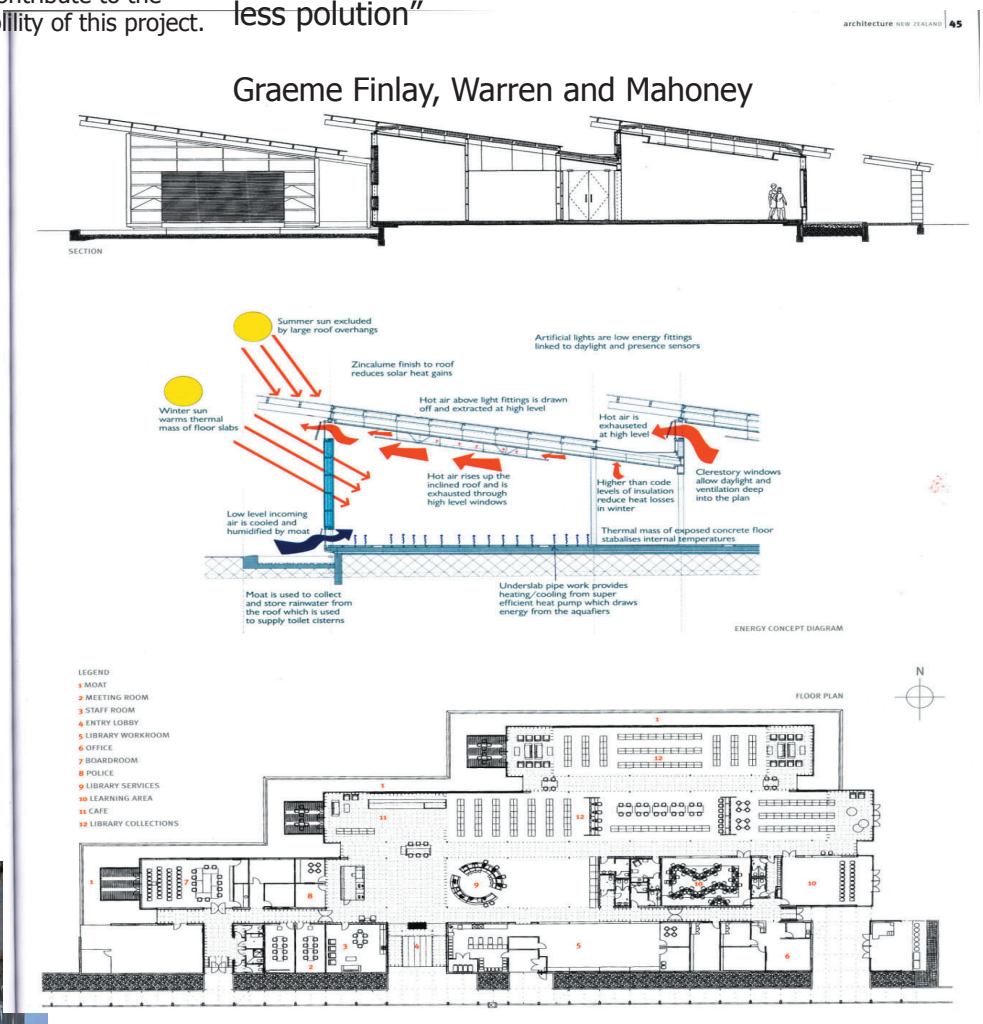


Two views showing the exterior of the building. The left view illustrates the moats, while the right view shows one of the outdoor reading areas.

Below is a diagram showing the sustainable practices put into place for this Library. Roof slope, floor plan layout, water features, heat pumps, and glazing all contribute to the overall sustainability of this project.

"Warren and Mahoney believes that sustainability is one of the most significant influences on the future development of architecture. It is simply efficiency, or getting more for less. More comfort for less energy, more services with less water and sewage, more materials with less waste and more productive, providing healthier environments with less polution"

Graeme Finlay, Warren and Mahoney



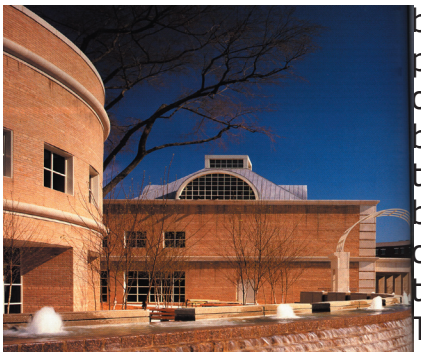
Public Library of Charlotte and Mecklenburg County: Charlotte, NC

Architect: Middleton, McMillan, Architects, Inc.
Size: 80,000 square feet

Like many cities, Charlotte was home to a Carnegie Library. Steel industry mogul Andrew Carnegie set up endowments for libraries in towns across the United States in the early 1900's. This new library for Charlotte is a tribute to that first neo-classical library. This is also a case study in building adaptive re-use. An existing park is located on the site as well. This provides a great area for outdoor library activities. Materials include local limestone and brick and steel roofing for an oddly shaped clerestory tower. This tower overlooks the entrance and the great room space. Curved walls inside the library identify meeting and community spaces. Spaces are arranged along a rectilinear plan. Classical details are used throughout for ornament such as pediment topped shelves and arched windows. Street landscaping was emphasized because of the existing park as well as the use of the rest of the site for the building.

Main programmatic areas are:

1. three-story reading room
2. Children's wing
3. boardroom
4. local history reading room
5. meeting rooms
6. great room
7. existing park with large water feature



View showing the street side of the Library. The large water feature acts as a buffer from street noise as well as contributing to the overall aesthetic of the park

Analysis:

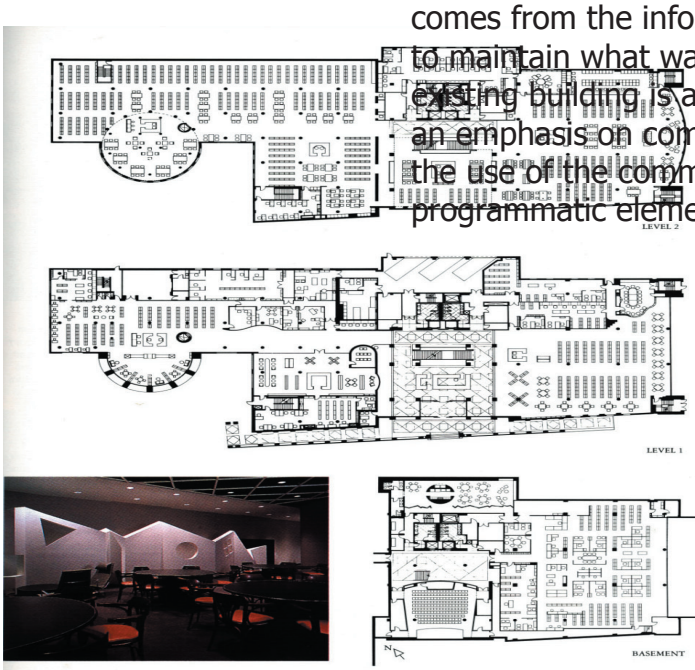
The Charlotte library also responded to a need for more space. They had a history of quality library buildings and wanted to continue that but also pay respects to the ideals of the Carnegie Libraries of the past. The attention to the exterior of the building is a good attribute for this example. Also, the re-use and re-design of the exterior of the building was successful. The plans seem a little congested but the abundance of windows seems to help balance this.

Translatable concepts:

- use of local materials
- great room concept
- attention to landscaping and outdoor space
- homage to the past

Social Needs Analysis:

The social factors of this project deal mostly with the preservation of the past and what the Carnegie Libraries represent. Do they represent monetary wealth or a knowledge of wealth that comes from the information inside? The decision to maintain what was there instead of leveling the existing building is a valuable one. There is also an emphasis on community in this project with the use of the community meetings as a major programmatic element.



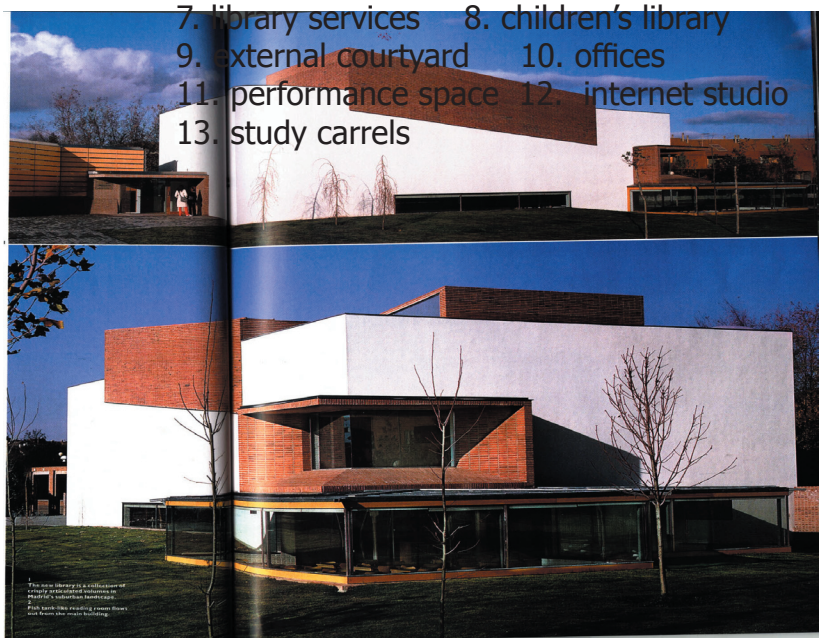
Public Library Villnueva De La Canada: Canada Madrid, Spain

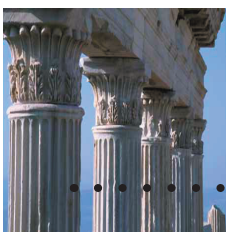
Architect: Churtichaga and Quadra-Salcedo
Size: ~40,000 square feet

The Villanueva Library is described as a living organism, a shift from the traditional book repositories of the past. It describes the library as a space for many functions that respond to the needs of people and the ever changing world of media and technology. This unique library is located in a residential area and has created an iconic form for itself because of the relatively basic surroundings of the low-rise housing that surrounds it. The building is made up of very articulated forms. These cubes interact with each other to create simple spaces inside. Large expanses of glass are used to create corners without interrupted views from mullions or seams. Clerestories are used to light spaces indirectly. The children's area is a star-shaped space that radiates from a central column. This library also uses the ramp idea to move people through spaces and to define them.

Main programmatic areas are:

1. entrance
2. lobby
3. book stack hall
4. magazine area
5. ramp
6. reading room
7. library services
8. children's library
9. external courtyard
10. offices
11. performance space
12. internet studio
13. study carrels





Analysis:

This library is a demonstration of the playfulness that the libraries of today are designed for. This and the Seattle library, although on completely different scales, are examples of integrating the elements of a library and creating a unique public space for everyone to use. Large open spaces flanked with small areas for reading or other activities promote community interaction as well as autonomy for those who need their own space.

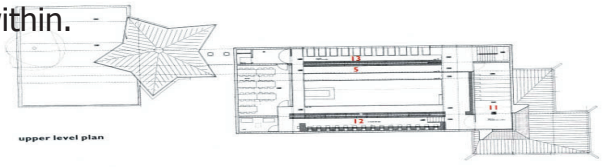
Translatable concepts:

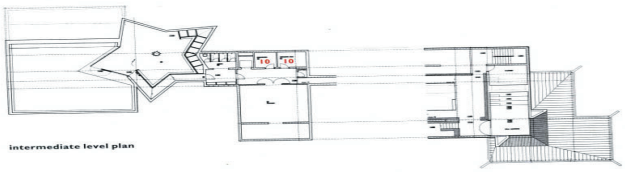
- use of indirect lighting with light shelves
- identifiable space by shape i.e. children's area
- performance area
- color coding of areas with materiality

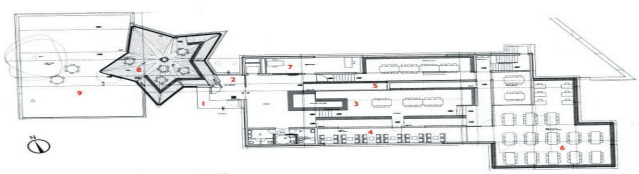
Interior view of the library. The top picture shows the central feature reading area with the unique star shape structure.

Social Needs Analysis:

This library is designed as a heart of the community. It serves as a social gathering place for a small close knit community. The use of a unique indentifiable space is also successful in the star shaped vestibule area. This building also has a unique exterior and seems to be accepted by its users. The shapes were driven by internal circulation, an important aspect of human interaction and understanding of the spaces within.







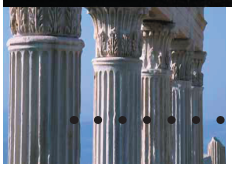
Minneaplois Public Library - Pierre Bottineau: Minneapolis, MN

Architect: RSP
Size: 12,355 square feet

This project was very unique in that it adaptively re-used the original Grain Belt Brewery and the Millwright shop along with a new addition. It is described as an accessible library and lively community gathering space. The structures that were re-used were built in 1893 and 1913 respectively. The space is made up of two great rooms with high, vaulted ceilings. The children's library is home to a youth computer room, children's books and other materials, a small gathering and storytelling area and help desk. The project was related to the Mississippi River and includes a large art piece called "River of Knowledge." This project has received many awards for preservation and interior design work.

Major programmatic areas are:

1. entrance	2. lobby
3. circulation	4. juvenile tech
5. children's library	6. lounge seating
7. storybook area	8. exterior equipment
9. service entrance	10. maintenance
11. staff workroom	12. office
13. supplies	14. break room
15. teens	16. adult collection
17. adjunct reference	18. Sheridan room



Analysis:

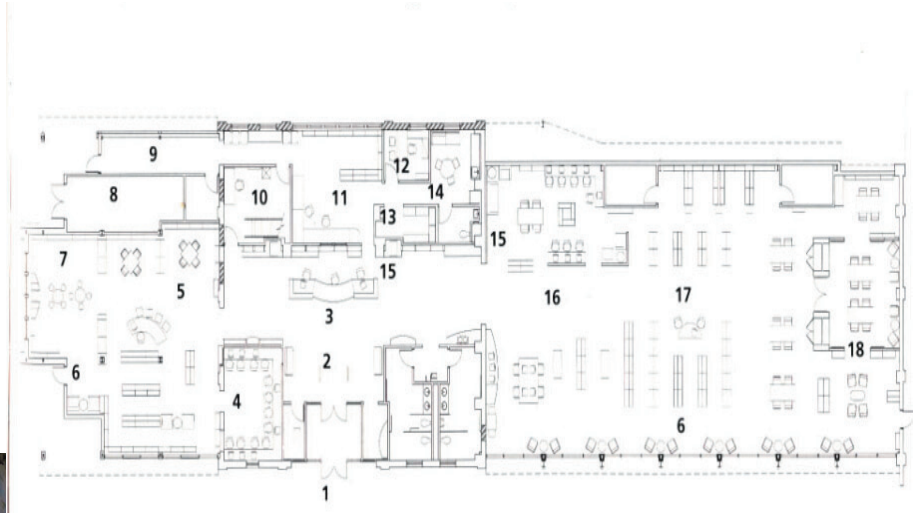
This project is a prime example of preservation, which is one of the main goals for this project for the aquatic element. Once again this project had the "living room" theme. The interiors were very well designed and bring a warm feeling to the industrial feel of the original buildings. Another goal of this library is to encourage readers to stay and read at the library rather than leave right away.

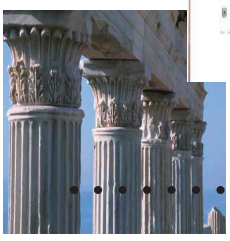
Translatable concepts:

- building preservation
- unique interior design responding to surroundings
- "living room" concept
- local history alcove
- existing materials

Social Needs Anaysis:

This project is a great example of responding to social needs. The neighborhood had outgrown is small but popular location. The firm who designed this building saw a great opportunity to re-use a part of the city's past to enrich its future.





Maryville Aquatic Center: Maryville, Missouri

Architect: Shaughnessy Fickle and Scott
Size: ~3,000 indoor with pool area

This project was in response to the outgrowth of the old pool in Maryville. The town of 10,000 now expects about 60,000 visitors a year, with more than half from out of town. Funding for the project was difficult because the town has limited funds for projects like this. Instead of forcing different elements of the project together, the designers let the program shape itself. The materials and shapes have a Mediterranean feel because of the blue stucco and contrasting beige colors. The pool itself has a unique shape with children's area that contains water spouts. There is also a diving well at the opposite end of the pools. Interior spaces include the locker rooms and mechanical. The large blue feature has on its face a clock that reminds all users the time at the pool always goes by too fast. The designers also tied their elements to agricultural structures.

Main programmatic areas:

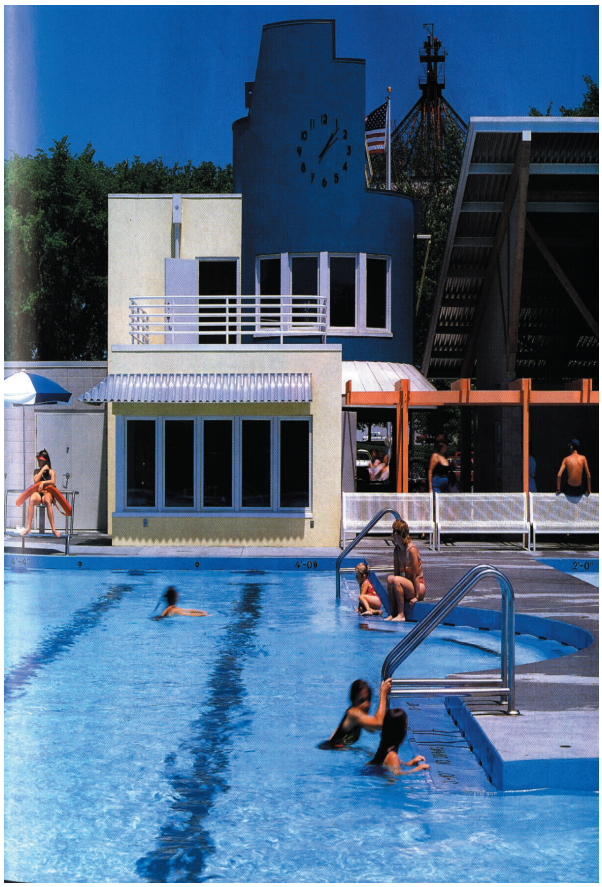
1. Tickets
2. Office
3. Storage
4. women's shower
5. men's shower
6. basket room
7. mechanical
8. dining area
9. concessions
10. pool
11. shade structures
12. sunbathing area
13. filter house

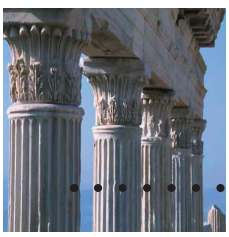
Analysis:

The themes for this project also tie directly. This town was also in need of a new pool. They didn't re-use the existing building, but replaced the old in order to create a place for the community to come together. This project is situated on a long east-west axis to capture the prime sun. Sustainable elements don't seem to be present and creating a sustainable pool will also be a great challenge.

Social Needs Analysis:

This pool area is very similar to the goals for the St. Cloud aquatic center. It promotes social interaction on a small scale in a smaller space. It also promotes a positive attitude for users because when people are at a swimming pool they are generally expecting to have a positive experience and should have a positive disposition upon arriving.





Angus Glen Library and Community Center: Markham, Onario

Architect: Shore, Tilbe, Irwin and Partners
Size: Phases are in different stages of completion; library is 29,700 square feet, community center and library is 172, 905 which includes an aquatic center and hockey arena with two sheets of ice

This project contains many elements that coincide. For one, this Angus Glen will house both a library and pool. These two typologies aren't seen together often. The idea of the community center as a whole and placing them in a central location is warmly received by the community. The theory behind the center is to strengthen the community. Markham has a reputation of quality when it comes to family and community life. Materials such as limestone and heavy timber are being used locally.

This center is for a suburb of Toronto so the special requirements are very similar. The library will house many technology based features. One of the main goals is to provide ambiance that one would find in a high end bookstore.

Main programmatic areas: Library.

1. fireplace lounges 2. café area
3. teen area 4. adult area
5. group rooms 6. individual study
7. computer training room

Pool

1. competitive pool
2. access to fitness area by pool and hockey users

Interior view of transition space between hockey arena and gym space.

Below right is an interior of the library under construction.

Analysis:

This case study brings a lot to the table. The underlying themes behind it including to better serve the community and bring them together are very important. The one thing that differs is that the pool is indoor here. Part of the larger scheme in this study is the location of all amenities in one place.

Social Needs Analysis:

This large community center is a mixture of many recreational elements. This brings the library to a recreational function rather than a educational function. Should it be both? Users of the facility upon completion will include many athletic users. This project seemed to have a strong tie to hockey and swimming. The indoor pool will be able to be used year round. It is very beneficial to this community that they agreed to pass a referendum to invest in their social capital to fund a project like this. They also received money from the government. Hopefully all communities can benefit from centers like this one. The problem often lies in those who feel because they will never use the facility, why should they pay for it. A valid claim, but it seems so obvious that a community center such as this can benefit the community as a whole.

Programmatic Requirements:

Spatial Requirements:

(Major Program Elements are listed separately for each function; the library and the aquatic center. Later design efforts may connect these either physically or visually and will create new program elements as design progresses.)

Library:

There are six major space types defined for the St. Cloud library.

1. Collection Space: for print and non-print materials.
2. Reader Seating Space: places for users to read or work
3. staff space: workstations and other spaces that support the work of the staff
4. programming and meeting space: used by the general public and for the administration of the Great River Regional Library System as well as library staff
5. special use space: for equipment such as photocopiers, pamphlet and flier storage, microfilm readers, and public computer stations
6. non-assignable space: vestibules, restrooms, stairwells, mechanical etc.

Within each of these program elements, there are many subcategories including the following:

Collection Space:
Adult Collection – This includes all fiction and non-fiction book titles. Self help titles and other books of this nature would be included here.

Teen Area – This is a special area devoted to teens that would include not only print materials, but media items such as videos, DVD's, music

collection, and periodicals especially for teens. The area would be inviting but conducive to this specific age group.

Children's Area – The heart of the library, the children's area brings life to the rest of the building. This area would be specifically designed for children from birth up to age 12. Books and materials would be grouped by age with a special area for toddlers. Computers will also be available for children's use with internet, reference, and learning programs. Play items would also be included as well as small rooms for children's story hour and group activities.

Reference/periodicals/documentation center – This area would be devoted to research and would be staffed to assist anyone needing help with their project or interests. Periodicals are often used for research so they would be near the reference section.

Reader Seating and User Space:
Great Room – The great room will be a central space with atrium functions that will carry throughout the building. It will be the focal point and fulcrum of the library. It will contain areas of grouped public seating as well as individual units for quiet study. Instead of these areas flanking book stacks, the reading areas will have their own unique character creating a destination space for reading, thinking, reflecting, socializing and relaxing.

Digital Media Center – Computer workstations will be located throughout the building, but the media center will concentrate a large computer lab setting with staffing to observe and offer assistance to users.

Research Center – This space will be located near the reference and periodicals area. It will offer special services to assist in research with a focus on local history and culture. It will house special

collections similar to those located at the Stearns County Museum and the two will work together to increase their collection and services.

Staff Space:
Provides auxiliary spaces for staff to carry out functions of assistance to the public as well as keeping the library running on a day to day basis.

Programming and Meeting Space:

Offices and Meeting Space – These will be for the staff of the library locally. Administration and support will be located here to serve the library. Staff break rooms and other private functions will be located here.

Great River Regional Library Administration – A special element of the new St. Cloud Library will be the home of he headquarters for 32 branch libraries. This space will be separate from the rest of the main library and is mostly comprised of offices for coordinators and department heads. It has its own requirements including: administration, fund development office, finance, technical services, circulation and distribution, acquisitions, collection development, automation, children's services, marketing, adult services coordinator, inter-library loan, regional supervisors, staff facilities, and garage and receiving.

Public Meeting Rooms – These spaces will be dedicated to community functions ranging from city organizations, high schools, and private users who need a space to gather.

Special Use Space:
Assistance equipment – This includes space for public photocopiers, scanners, microfilm readers, and other computerized equipment to assist users of the library.
Café – The café will offer light snacks as well as a

full service coffee bar.
Special attention will be paid to children's needs as well. Seating here will be for about 25.

Book store and gift shop – The book store will provide opportunities to purchase books and popular items. Music and movies will also be available. Local authors and artists will be featured and gifts will also be available.

Non-Assignable Space:
Mechanical, HVAC, and Electrical– Mechanical rooms will be developed as sustainable designs are explored and will be adjusted accordingly. Wireless internet will be available throughout the building.

Circulation – 15% will be allowed for circulation.

Restrooms – Restrooms will be located for the public throughout the building. Small two – three unit restrooms will be duplicated and placed throughout for convenience.

Space by square footage:
(This is an estimate based on the needs assessment by the St. Cloud Library committee. Further refinement will continue as design progresses.)

1. Collection Space: 28,000
    - adult: 9,000
    - teen and children: 15,000
    - research/documentation/periodicals: 4,000
2. Reader Seating Space: 14,000
    - Great Room: 3,000
    - Digital Media: 6,000 (Dispersed)
    - Research: 4,000
    - other 1,000
3. Staff Space: 2,000
    - workstations and offices: 2,000
4. Programming and Office Space: 19,000
    - offices and meeting: 1,000

- Great River Regional Library: 17,000
- public meeting 1,000

5. Special Use: 3,000
   - assistance equipment: 1,000
   - bookstore and gift shop: 2,000
6. Non-assignable: ~10,000
   - Mechanical, HVAC, Electrical, Receiving: not yet determined
   - Circulation: 15% of total
   - Restrooms: 2,000

TOTAL: ~80,000 square feet

Aquatic Center:

(Square footage for each element of water design is not yet fully developed. Figures are currently based on case studies, but site conditions will ultimately determine size.)

Current Pool Building - The original building that stands will need to be evaluated for structural integrity to determine the space that can be used. Located within will be the locker rooms and restrooms and parts of the staff areas and concessions/café.

Lap Pool - To restore the site as a competitive pool or just for recreation.

Zero Depth Entry, Waterslide, and Children's Area - These areas are all located near each other. These areas are all designed with children in mind. They will mainly be used by children.

Diving Well - This feature will be home to a series of springboards for competition as well as recreation for those who are old enough and able.

Restrooms and Locker Rooms - These are an important part of pool design. Ensuring that users are comfortable here is also important. Special care will be used in designing a safe, comfortable environment for families, single users, and other groups.

Staff Area - The staff area will be office and coordination areas for breaks and administration when the pool is in operation. These offices will be run by the Parks and Recreation Department. Also located here will be lifeguard support and station and first aid and emergency equipment.

Concessions and Café - This area is a vital part of the summertime experience. Food and drink are important to pool users especially on hot days.

Filter House and Mechanical/electrical - This space will house the mechanical area necessary to treat, filter, and circulate water for the aquatic center. Investigations into sustainability for aquatic centers are underway.

Current pool house: 2,000
Lap pool: 25 meters long by 6 lanes
Zero depth entry pool: 500
Play equipment area for children:500
Waterslide(s): varies, ~100 floor space
Diving well: 500
Restrooms/Locker Room (Men and Women)
Staff Area: 200
Concessions/Café: 500
Storage and pump/filter house: not yet determined
Mechanical/Electrical: ~500

The following pages will be documentation of the final design process including intial ideas following the design process I took until the completion of the project.

Included in this section will be some description but will mostly comprise of diagrams, model photos, and drawings.

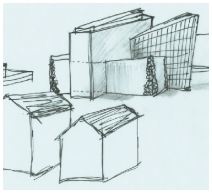
The following is from my thesis presentation and describes the project hollistically.

Today I will be sharing with you how I arrived at the solution you see behind me and what influenced my design decisions. First, I will discuss my process as a designer, and then I will talk about my initial intentions and design decisions, what influenced me, including sustainable considerations, precedents, experiences and literature. Then I will explain my project as you see it behind me. Then I will answer any questions that anyone may have.

Process:

Throughout my time here at NDSU, I have learned that when it comes to design, it's not always the destination, it's the journey that matters. Process to me means the decisions you make along the way to help you arrive at the final solution. When I approach a new project, I feel that visiting the site is one of the most important aspects. Getting a feel about your surroundings can help you better understand the context.

After visiting this site many times as a child, I already knew of its playful and dynamic nature. There is always activity from children playing, to students attending high school and playing sports, to adults leisurely strolling around or introducing their children to the area.



Next in my process, is the sketching phase. This is when I write down my first impressions and important aspects of the site such as traffic

patterns, wind and climate data, hourly activity, axial relationships, and the types of people who are around among other things.

When dealing with a project of this scope, it is important to look to precedents for information. I reviewed many case studies and with my own knowledge of a library, I started to form some design ideas.

Next, I started to model with clay and also 3-d computer programs to get some form studies.

After deciding on an axial relationship with the streets, lake and existing pool building, I moved on to space planning.

Then I started to consider materials and sustainable aspects that would also come to shape the final design.

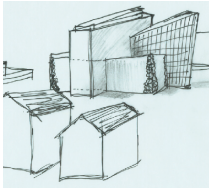
Once design decisions were made, I started to finalize my model with the Sketchup program. I started with detailing interior spaces to have a warm open and inviting feel.

After this, I implemented my decisions about exterior materials. The main ones include recycled steel for structure, and exterior metal panels, low-e glazing, photovoltaic paneling, recovered timber for the link space, and recovered pallets for decking material.

Site planning and detailing came next. I placed trees and park benches around already existing pathways around the site to encourage movement.

Finalizing the design was next with completing the final model.

Initial Decisions and Design Intentions:



For my design intentions I did a lot of investigating of precedents and also some books that I had

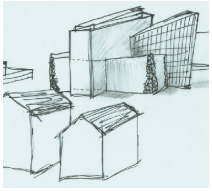
read in the past including Ken Yeang's Skyscraper, Bioclomatically Considered, which was the back bone of our Skyscraper project. I also read some new literature from Simon Unwin. His books, Analyzing Architecture, and an Architecture notebook were very helpful. He presented analysis of a wall, which can influence humans on many levels. I used these ideas about walls and translated them into my design. I also wanted this project to be about bringing people together in the community and making this library a place where all people want to be, so I drew on my knowledge of sociology and how buildings can impact people.

When I was researching for this project, I was able to use some information from GLT architects in St. Cloud that had been prepared for them for the actual library that will be built. Based on their information, I shaped my space allocations and programs. The building behind me is roughly 80,000 square feet. A large part of the program is from the Great River Regional Library System's administrative offices. These offices house the administration for regional branch libraries.

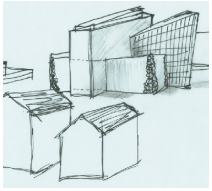
Sustainability:

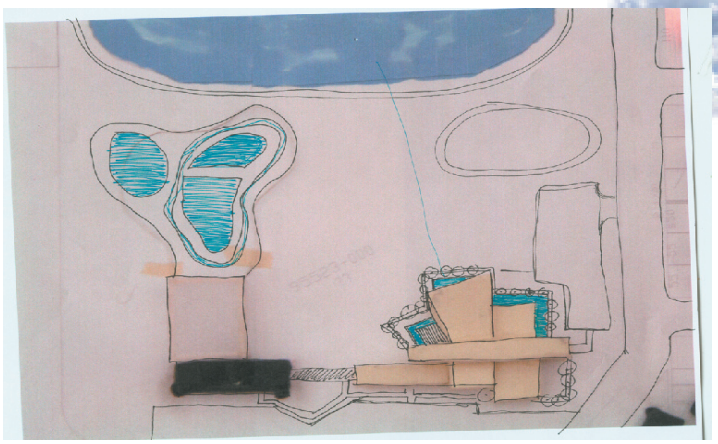
Sustainability has become more than just an idea to me. Today, everyone, not only Architects need to start thinking more about the way that we live. With all that I have learned in college, I think the techniques and concepts behind sustainable design will be the most important and influential. When I was working on this project, sustainability became more inherent. Some of the things I employed were those that I already mentioned, along with basic ideas about site and building placement, greening up the site, interior quality and fresh air concepts.

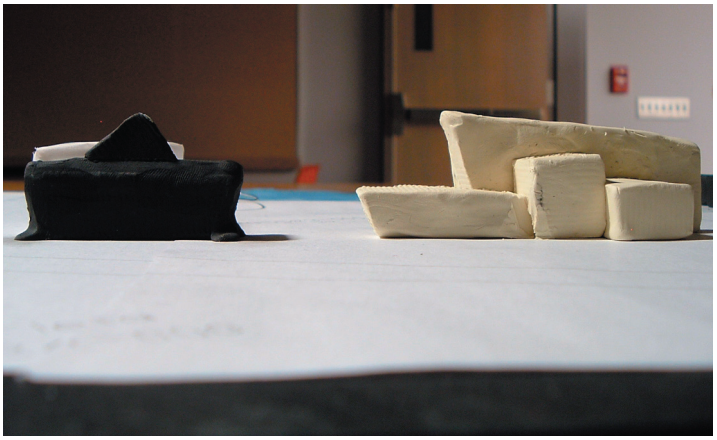
Some other influences with this project for me were notions of the site when I was little. It was once used as a place for recreation with paddle boating, ice skating, swimming, jogging and a



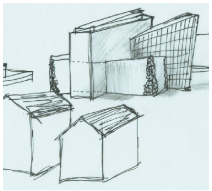
host of other activities. Some of these things no longer take place, as the swimming pool has been closed and paddle boating and ice skating have been limited. I think this site has great potential for the city as a destination area. It is historical as well, and that is one of the reasons I proposed a new water park using the original pool building as an adaptive re-use project. For these reasons which are mostly reminiscent for me, I chose this project and this site.

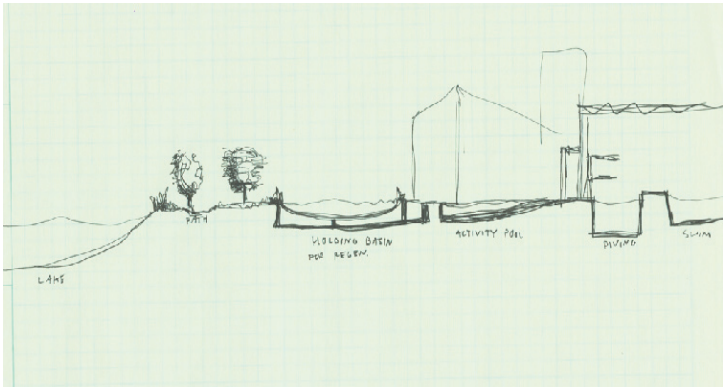


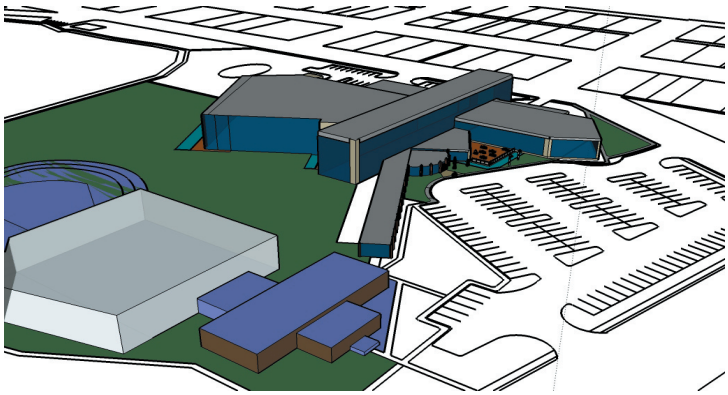




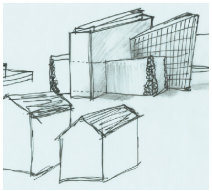
The above images are of a clay study model I constructed to help along the design process. By using clay, I was able to mold and shape forms, take pictures, and then sketch with overlays. This helped me discover new ideas and designs as I was learning about the site and context.

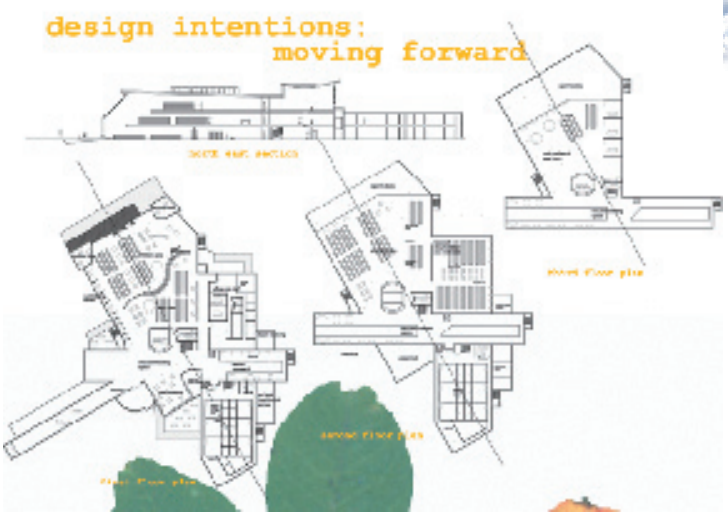




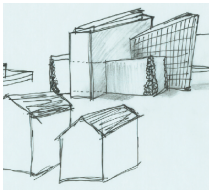


Above are more study sketches. Two above are section drawings and below is an early sketchup model to help me see more form and space opportunities.

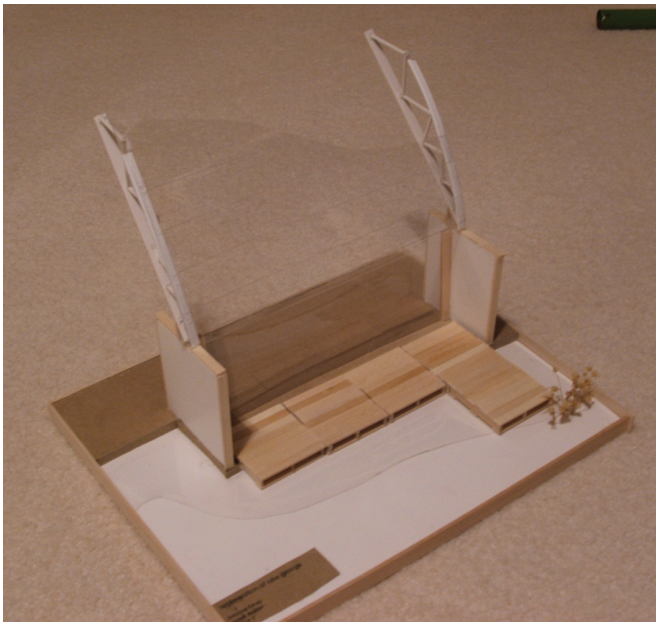




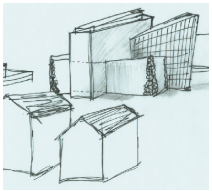
These images are parts of two boards I put together for the mid-term review. Above are the first sets of floor plans I had. Below are site information and design issues. The plans from above changed from this deisgn as shown in the next section of final deisgn boards.



Above is the site/context model of the site with the new buildings in white.

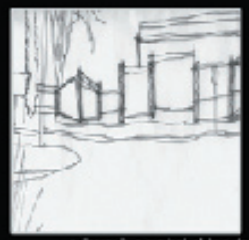


Above is a detail model showing the pallets as decking and the outdoor spaces that occur over water.

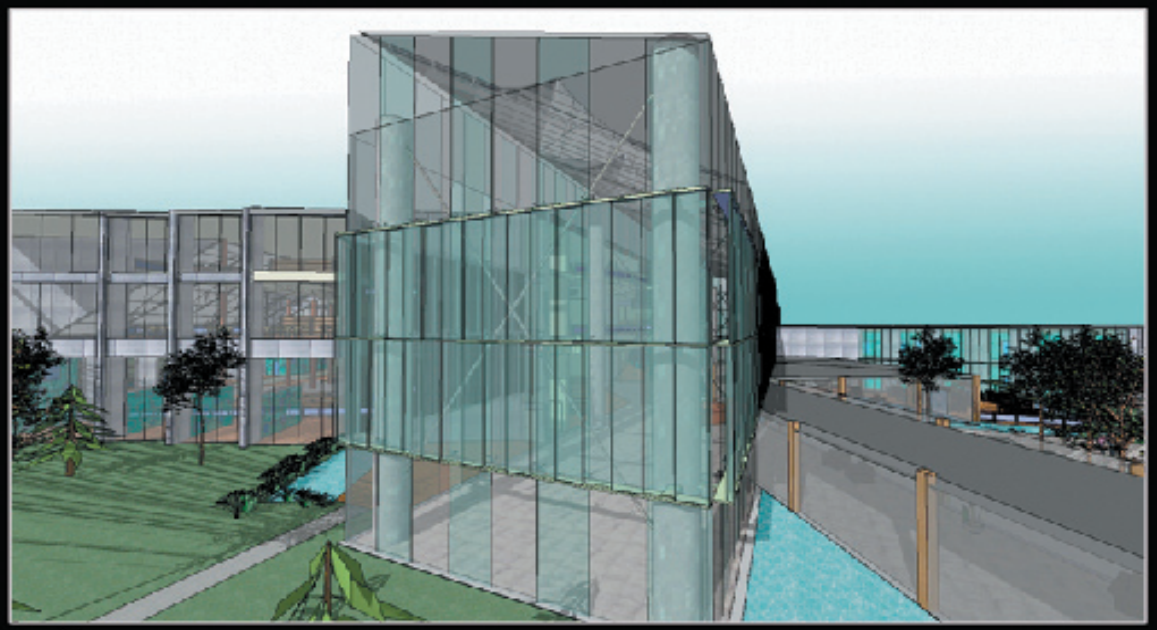


brianna.hines

heart of the community:
encouraging encounters
a new library and aquatic center for St. Cloud



A library is a symbol of knowledge and accessibility. Libraries of the past are symbols of wisdom. Libraries of today are welcoming places to learn and encounter the world around. This library will serve as a place to bring people in the community together and rejuvenate the site with activity and excitement.



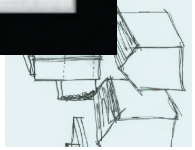
heart of the city:
the regeneration of lake george

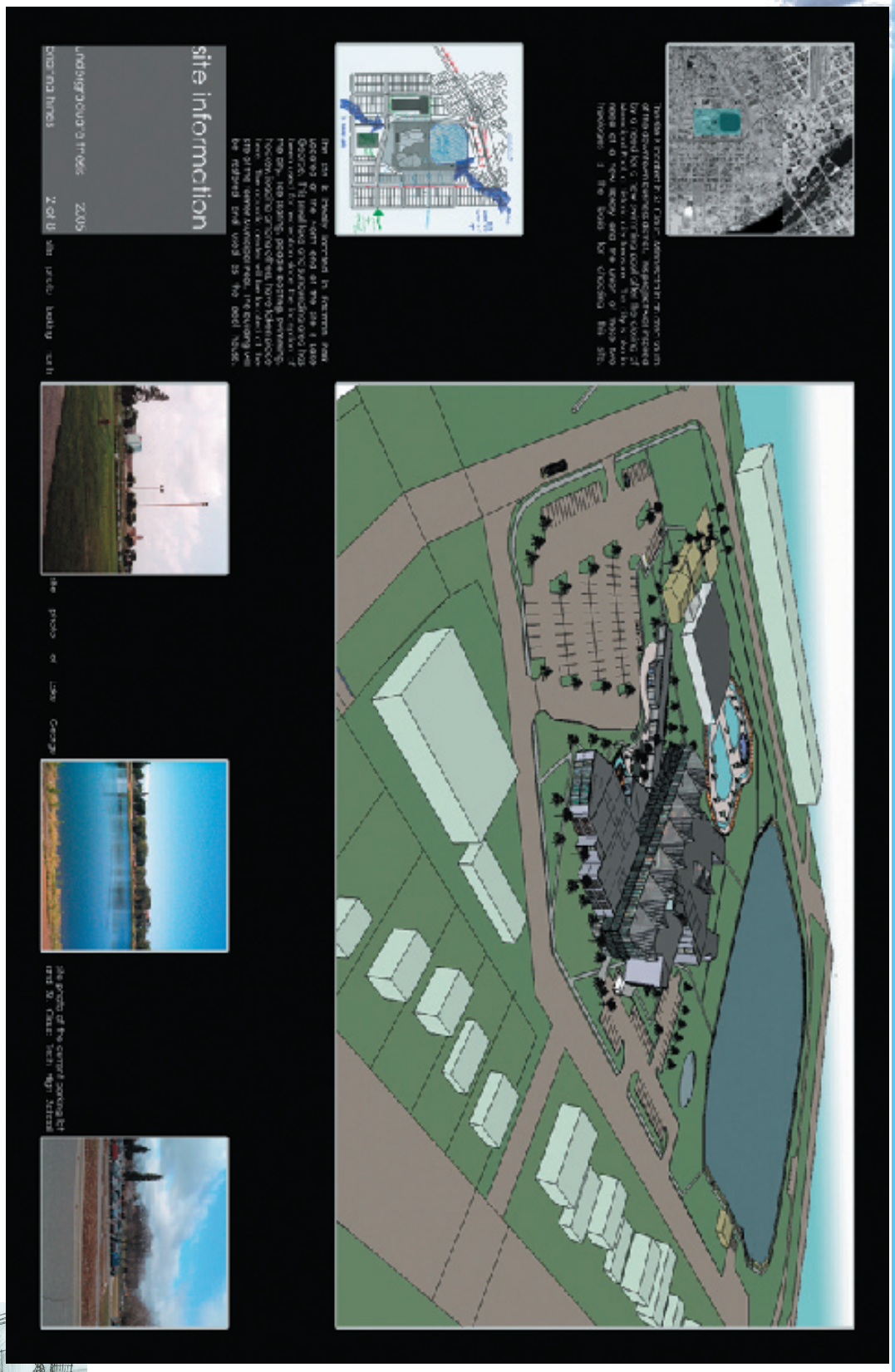
encouraging encounters

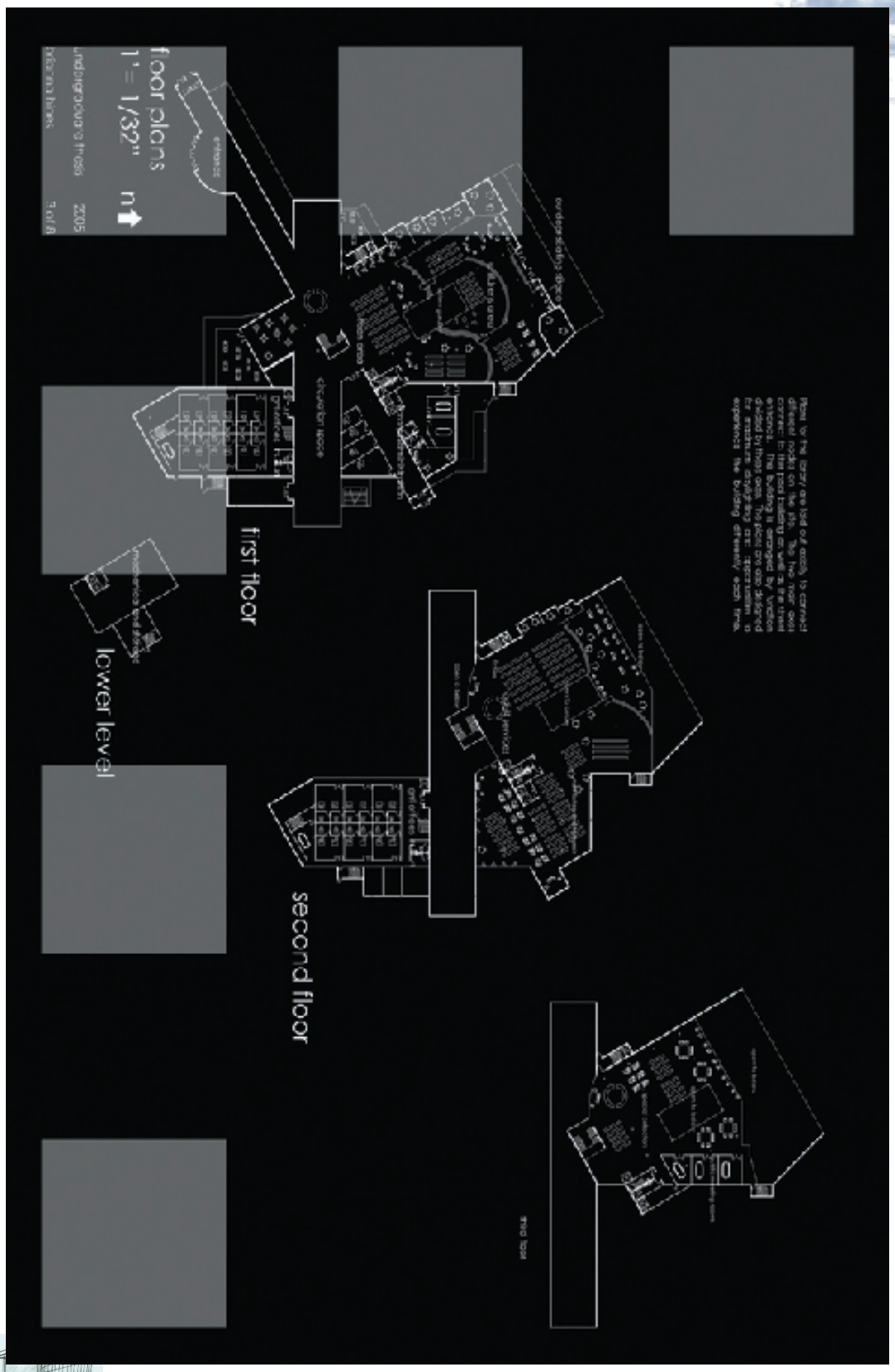
a new library for st. cloud, mn

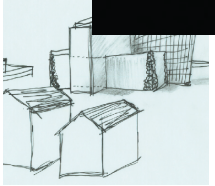
Undergraduate thesis 2005

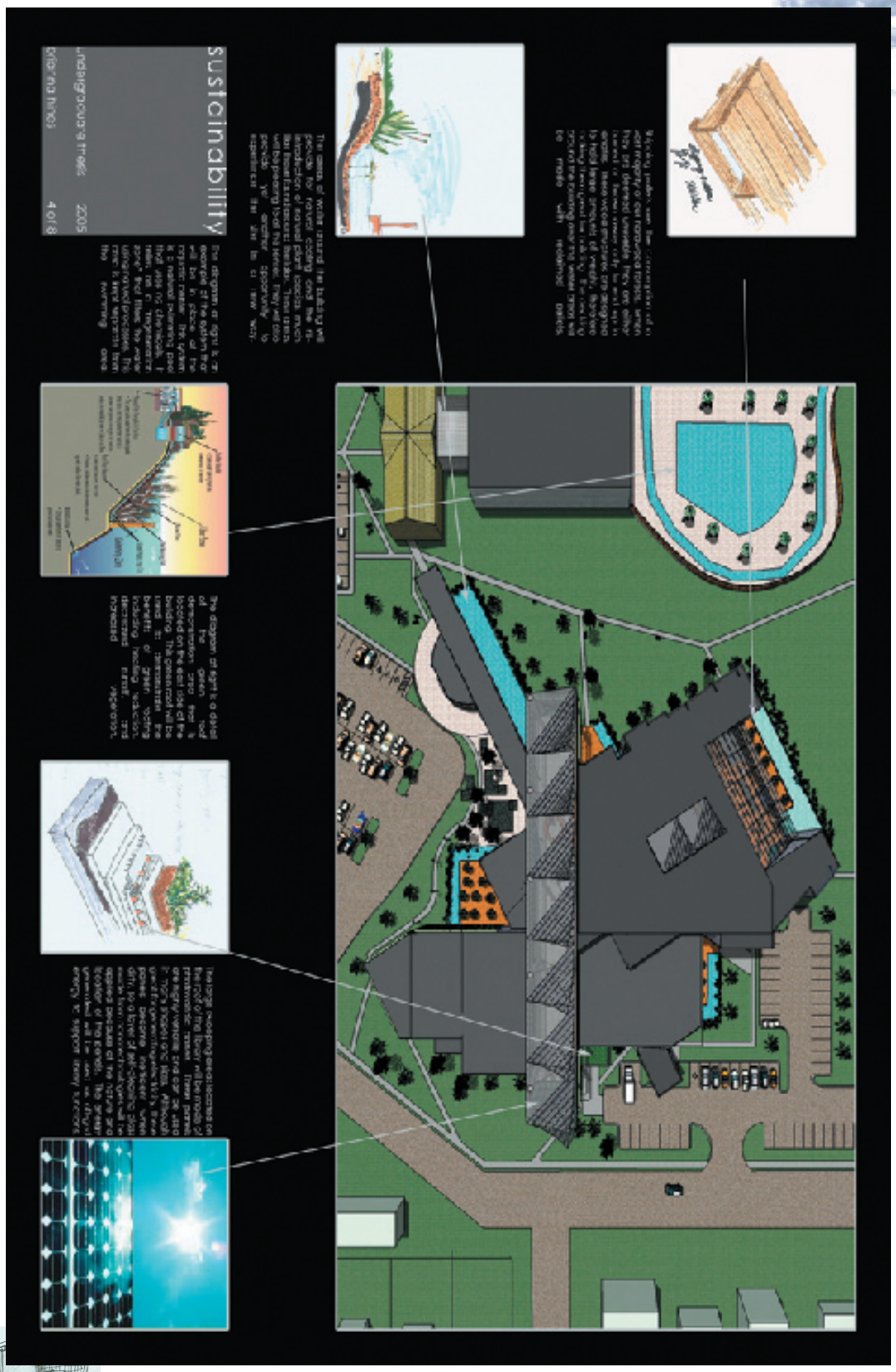
brianna hines 1 of 8

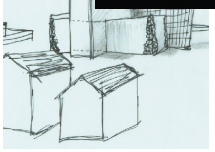


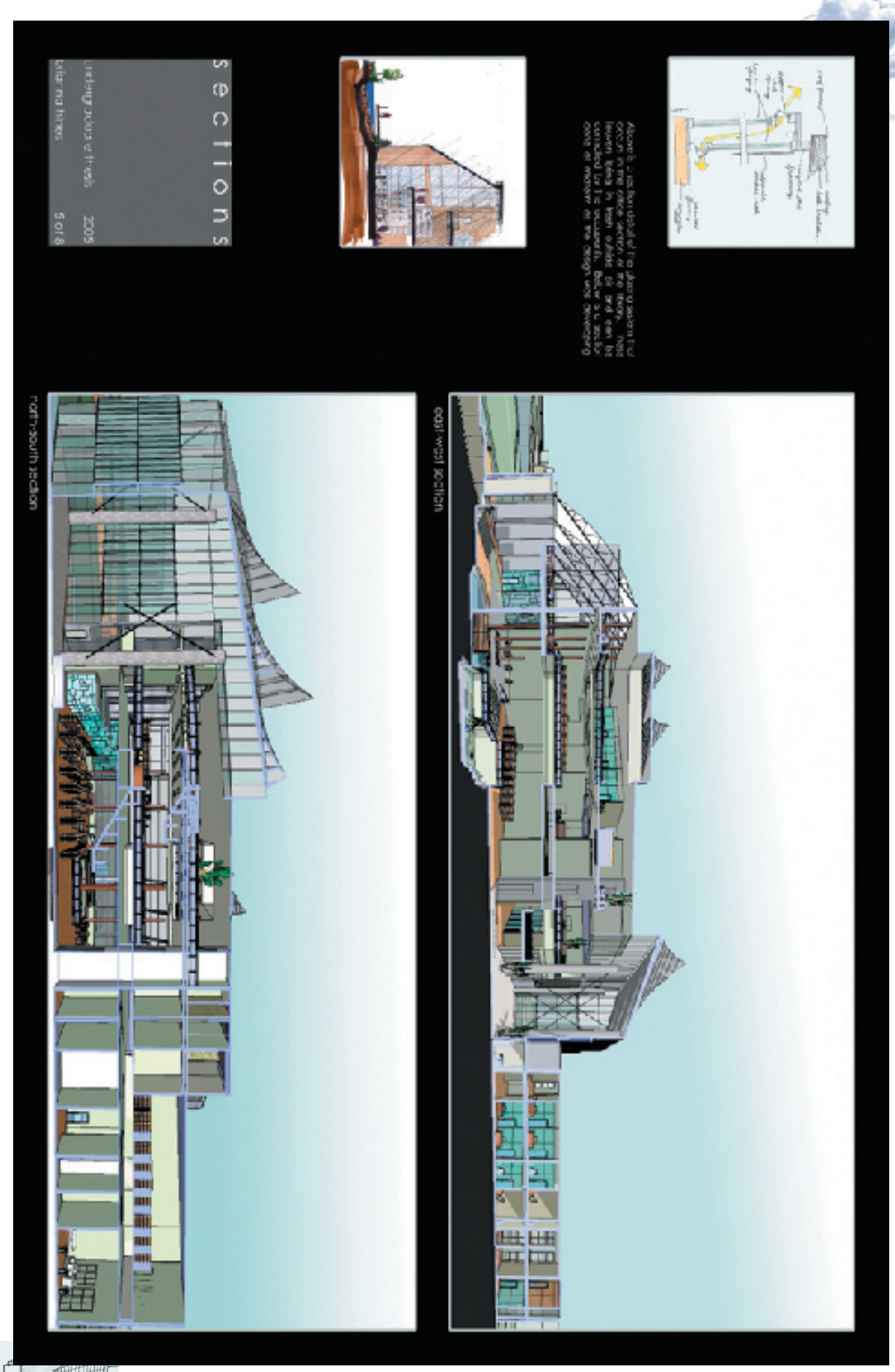


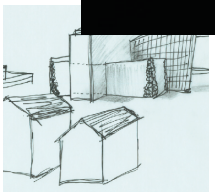

floor plans
1" = 1/32"
first floor
lower level
second floor




sustainability
brianna hines
2005
4 of 8




sections
2005
north-south section
east-west section



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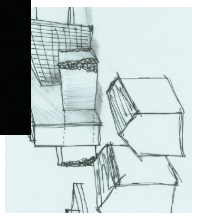
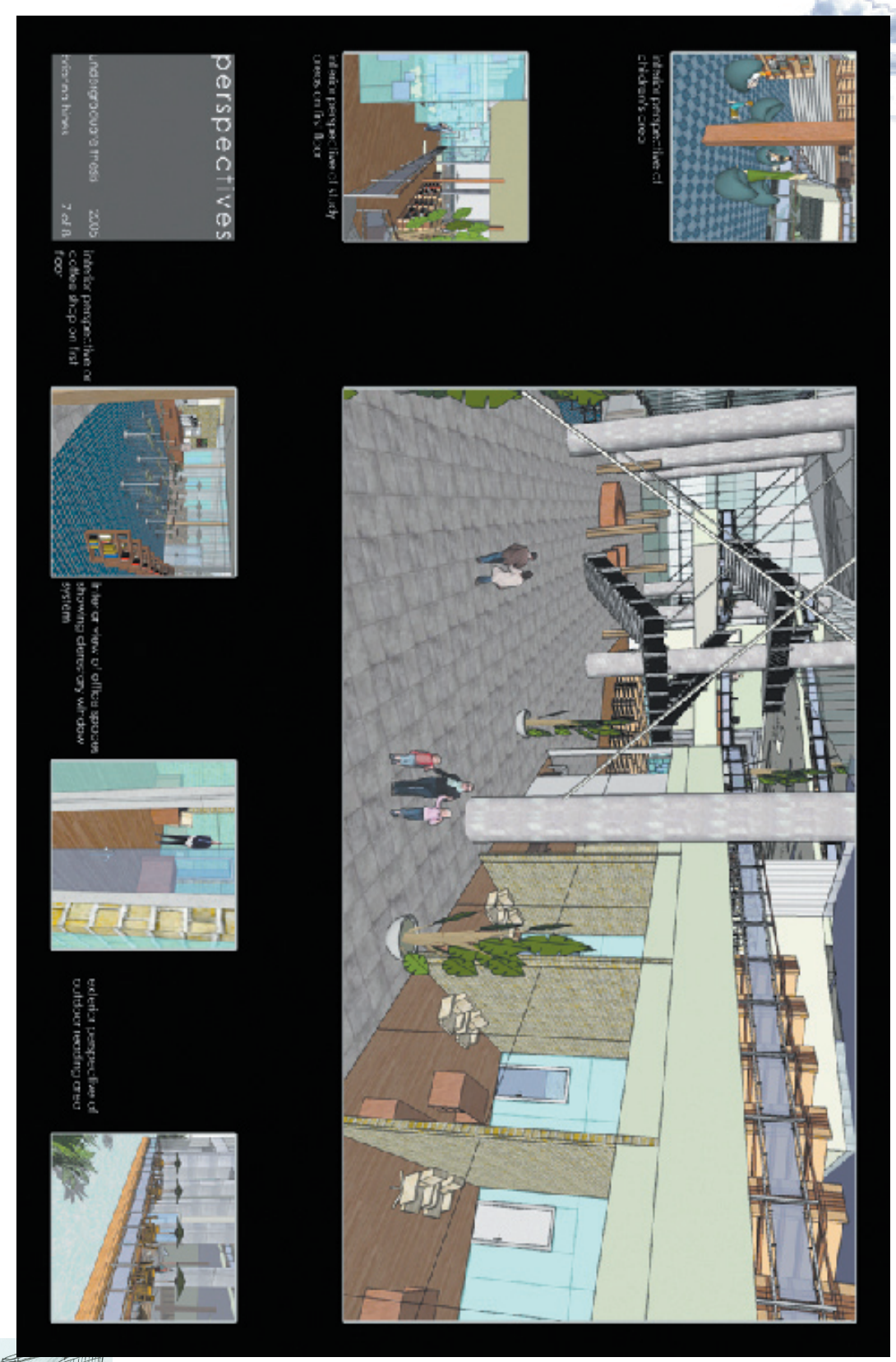
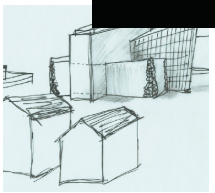
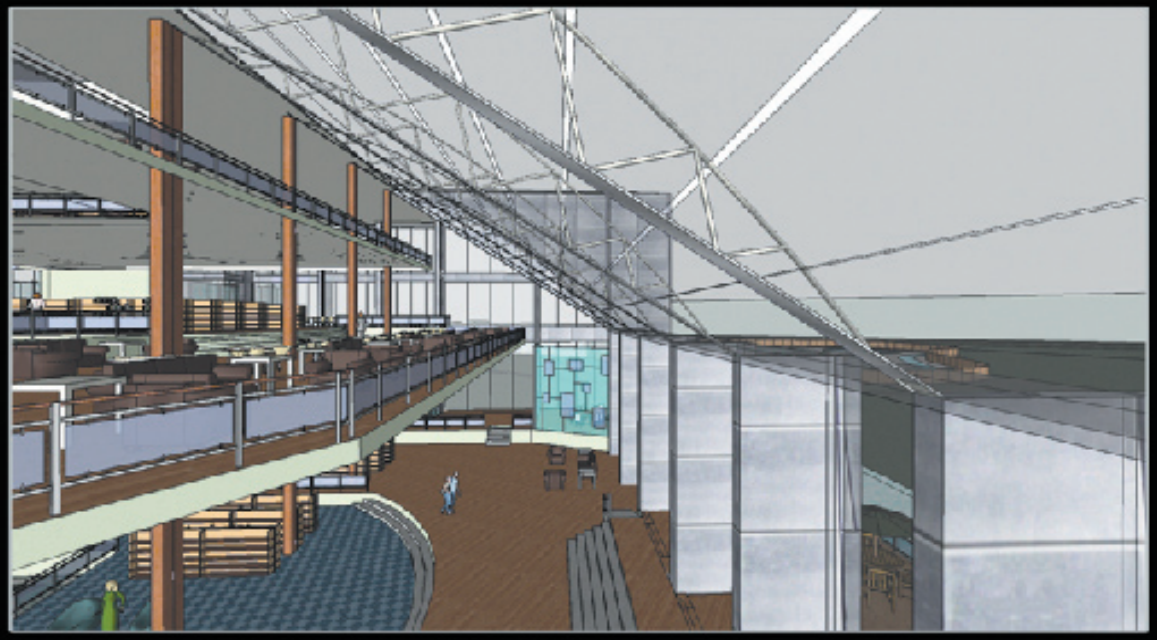



perspectives



heart of the community:
encouraging encounters
a new library and aquatic center for St. Cloud

interior perspective of second floor reading spaces



interior perspective of second floor circulation desk

perspectives

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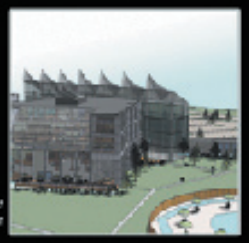
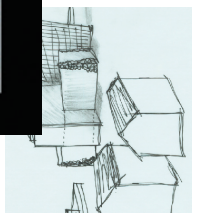
interior view of main space

exterior perspective of entry courtyard



exterior perspective with aquatic center



References

"A Brief History of St.Cloud." St. Cloud Times. Retieved October 5, 2004 from www.sctimes.com/visitors/history

Bertolucci, Carla. "Cave of Knowledge." Architectural Review. January 2004. pp. 22-28

Census 2002 Summary File Sample Data. U.S. Census Bureau. Retrieved October 5, 2004 from http://www.census.gov/

City of Apple Valley Website. Retrieved December 1, 2004, from www.ci.apple-valley.mn.us/parks/facilities/aquatic-center/main

City of Markham Website. Retrieved November 10, 2004, from www.markham.on.ca/mpl/

City of St. Cloud Website. Photos. Retrieved November 10, 2004 from www.ci.stcloud.mn.us

Climate Data Tables. National Oceanic and Atmospheric Administration. Retrieved October 5, 2004 from http://www.noaa.com

Hammel, Bette. "From Dilapidated to Delightful." Architecture Minnesota. November/December 2003. pp. 54-55

Hedin, Valerie. "Lake George Water Quality Evaluation and Management Options." Biological Sciences Thesis Document.

Holan, Jerri. "Civic Appeal." Architecture June 1995 pp. 88-93.

Lake George Shoreland Restoration Project St. Cloud, MN. United States Department of Agriculture Natural Resources Conservation Service. Retrieved September 15, 2004 from http://www.mn.nrcs.usda.gov/programs/lake_george.html

Lochhead, Ian. "At Home in the Public Living Room." Architecture New Zealand. March/April 2004.. pp. 40-45.

Markey Pool Design Website. Retrieved December 1, 2004, from www.markey-consult.com/ballwin.htm

Minnesota Public Library Website. Pierre Bottineau Library. Retrieved on November 10, 2004, from www.mplib.org

Nesmith, Lynn. "Latest Edition." Architecture. July 1990. pp. 82-85.

Olson, Sheri. " Seattle's Central Library." Architectural Record. July 2004. pp. 88-101.

Post, Tim. (2004, August). "Minnesotans Dive Into New Pools." Minnesota Public Radio. Retrieved September 20, 2004, from http://news.minnesota.publicradio.org/features/2004/08/27_postt_waterpark/

St. Cloud Public Library Site Selection. Great River Regional Library. Retrieved October 5, 2004 from http://www.griver.org/needanalysis/

Schumacher, L. (2004, June 22). "Library needs new home, city wants your thoughts." St. Cloud Times. Pp. A1, A5.

Stearns County Soil Survey. United States Department of Agriculture. pp. 87, 116

Swimming Teich Website. Natural Swimming Pool Company. Retrieved on February 10, 2005, from www.swimming-teich.com

Unwin, Simon. "An Architecture Notebook." 2000. Routledge, UK.

appendix a

thesis statement of intent

Statement of Intent
Brianna Hines
August 27, 2004

Regeneration of Lake George

Outdoor activities play an important role in everyone's lives. As a child, I was able to count on an assortment of activities provided at St. Cloud's Lake George Park Recreation Area. Within the past decade, this area has deteriorated and the vitality and vivacity which it once had is gone.
The area is located near downtown St. Cloud in an older neighborhood which is adjacent to one of St. Cloud's two main high schools. Lake George is a partially man made lake which formed after development in the area when the city was first forming. The lake itself was used primarily for ice skating and fishing and later, paddle boating. In the area was the city's first pool, known locally as Municipal Pool. It dates back to the 1940's and is an Work Projects Administration style building, or W.P.A. The pool is now closed and to generations of people is only a memory.
The city of St. Cloud is also in need of a new library. Because of the land available near Lake George, it would be an ideal location. This library would also house a small interpretive center about the history of the lake and surrounding buildings that once stood.
Already underway by the Stearns County Soil and Water Conservation District is a comprehensive lake reclamation project which includes planting of native plants and grasses as well as soil runoff controls.
The major premise of the project is to regenerate what was once a year-round destination for all ages. The need for a city pool as well as new library facilities will fuel the project, as well as my own memories as a child of this wonderful area.

The Regeneration of Lake George

A. Title

The Regeneration of Lake George: A new Heart of the Community located in St. Cloud, Minnesota.

F. Building Typologies:

There are two basic typologies that my thesis project will undertake. The main typology is that of a public library. The second being an outdoor aquatic center that will adaptively re-use an already standing historic building. These two typologies will convene to create a new destination for the residents of St. Cloud, Minnesota where the project site is located. The functions of these entities will be separate but will be unified by their task as a service for the public residents and visitors of the city. The library will be a replacement and update for the current library, which needs a new home. The outdoor aquatic center will replace the Municipal Pool which served the city for over fifty years and now has closed due to deterioration and lack of funds, leaving the city without an adequate pool. These two uniquely different typologies will create a new focal point for the downtown area where people of all walks of life can come together.

G. Conjectural Basis or Unifying Idea:

The major premise of this project is that regeneration is an essential aspect of architecture and urban design. Regeneration to me is the utilization of something that has undergone transformation. In this case, the site itself has underdone deterioration and is in need of repair. By re-locating the city public library to this site, people will rediscover the value of this urban center which once was a destination for fun. Combining a library with other recreational activities will encourage people to discover the benefits of their public library. Another advantage to relocating the library here is the location of one of St. Cloud's three major high schools, St. Cloud Tech. The high school

now sits on the East side of the park and would be within walking distance to the new library.

Another important idea is the unification of the community. This new center will bring all people together; and into downtown as well. People of all backgrounds will find these two typologies beneficial to their lives. The goal is to encourage children to find value in the library and have a safe place to go in the summer in the form of the aquatic center. Also, the idea of respecting and preserving history will be important to this project. The old Municipal Pool will be taken down, but the building that houses the locker rooms, restroom, concessions and other functions will remain with additions. The example of historic preservation and adaptive re-use are also conceptual and unifying ideas for this project.

H. Project Justification

As a child, I used this site, the land surrounding Lake George or Eastman Park, frequently as did my own parents as children. The Lake was used for activities ranging from paddle-boating, fishing, jogging, and rollerblading in the summer to ice skating, hockey and winter carnivals in the winter, among other things. Not long ago, the condition of the lake's water quality as well as the shoreline was disappointing. Storm water runoff and a large duck and goose population attributed to the poor water quality which killed marine life and prevented the water form freezing in the winter to allow for ice skating. In the spring of 2002, a joint conservation effort from the Stearns County Soil and Water Conservation District and the Central Minnesota Joint Powers Engineering Staff received funding from the DNR to restore the shoreline of Lake George with natural grasses and plants to reduce sediment runoff and restore natural beauty to the area. This effort will serve as a catalyst for my own project to further promote the area and to encourage water activities once again.
The Municipal Pool was once known as the best competitive swimming pool in the state after its completion in 1946. Two years ago the pool was forced

to close after the surrounding neighborhood had to be evacuated because of a chlorine leak. The bill to repair was in the millions, so the city was forced to close the local landmark. The city currently does not have a public swimming pool, only select wading pools. These wading pools are great for smaller children but older children as well as teenagers should also be afforded a safe place to swim in the summer. Many high school age teens are using the county's Quarry Park, which is a reuse of old granite quarries. The problem with these areas of water is that they are relatively unsafe and often very deep. Many people have been injured when using these old mining pits as swimming pools. A new man made pool and aquatic center will be safer and more conveniently located.
The current public library in St. Cloud is located downtown across from the Civic Center. It seems like a good site in theory, but as of late many people have complained about the condition of the facility and the lack of adequate parking. The city has developed a planning commission to choose a future site for the new library. They cite the need for abundant parking and a growing inventory as a reason for the new library. The site that my project proposes coincidentally is on the city's list of eight possible sites.

B. User/Client Description:

The Regeneration of Lake George will include the addition and relocation of the St. Cloud Public Library as well as the revision and addition to the current Municipal Pool in the form of an Outdoor Aquatic Center. The users will be anyone that resides in the are and visitors to the area who are interested in using the public library system. Users of the pool facility can be any resident or visitor of the city, which will mainly be used in warm months of the year. This project will be funded by a municipal bond that will also foresee the funding of the Civic Center Expansion. Maintenance and management of the Aquatic Center will be the St. Cloud Parks and Recreation Board. The Great River Regional Library system will maintain and manage the St. Cloud public Library as they are the managerial entity that maintains the current library.

The city will be the main client of the two projects.

The library will have typical business hours that will start at 9:00 a.m. and end at 10:00 p.m. to accommodate students and other users that need longer hours. Personnel will include the branch administrator, other management staff and their support staff. Hourly workers will post the circulation desks and media center as well as the help centers. These might be students working for work study programs from college or high school because of the proximity to both the St. Cloud Technical High School and St. Cloud State University. The aquatic center will be staffed by a center coordinator who will manage the activities of the center. Lifeguards will be on duty at all times and will range in age. Because of the nature of an aquatic center, the hours will vary with users. Swim clubs and competitions may have special hours and may also require parts of the center to be closed from public use. Open swim hours will range daily because of this. For the most part the center should be open to public use from 9:00 a.m. to 8:00 p.m. or later depending on hourly usage and of course weather conditions.

Parking in this area will be a concern. A lot currently exists but will be removed to make way for this center. An adequate ramp will be built in connection with the Library and the two functions may share this ramp for public use. The intention is to keep the ramp affordable but a fee will be charged to help buffer some of the costs.

C. Major Project Elements:

Library:
- Lobby, book return, information desk
- Reading room
- Research center
- Children's area
- Documentation area
- Digital Media center
- Book store/Gift shop
- Offices
- Mechanical/Electrical
- Support
- Restrooms

- Circulation
- Parking Ramp

Aquatic Center:

- Re-Use of current pool house
- Replacement of lap pool
- Zero depth entry pool
- Play equipment area for children
- Waterslide
- Diving well
- Restrooms
- Concessions
- Storage
- Mechanical/Electrical

The incorporation of the two elements will also be a major design consideration.

D. Site Information

The site itself generated the project, so the site selection was based on existing elements located in St. Cloud. The site is located in St. Cloud, Minnesota. St. Cloud is in the center of Minnesota and lies about 70 miles northwest of the capital city of Minnesota, St. Paul and also the large urban center of the Twin Cities. The region is the upper Midwest and borders Wisconsin, Iowa, North and South Dakota, and Canada to the north. The Lake George area is located downtown St. Cloud just south of the main downtown area. It's boundaries include Highway 23 or Division Street, a major artery, to the north, 12th Avenue to the west, 9th Avenue to the east, and 7th Street to the south. With the exception for Division street, middle density residential lines these streets and avenues. The homes located around the area are older homes from the early 1900's to 1940's. To the west is St. Cloud Technical High School, the first public high school in St. Cloud.

The history of the area is quite unique but also coincides with the general history of the Midwest when pioneers discovered the plentiful farmland that occupied our area. A Protestant Yankee by the name of John Wilson was one of the first settlers and is attributed to naming the town. Steamboats on the Mississippi first arrived from Minneapolis, then known

as St. Anthony's Falls around the 1850's. Steamboat trade was the biggest industry that formed the city as well as the logging boom that fueled the sawmills of towns all along the river and down into the Twin Cities. The Mississippi river was a major source of industry and population growth as it made travel possible and also powered sawmills and other factories. From 1890 to 1950 the population quadrupled in size, and was 29,000 in the latter. According to the U.S. 2000 Census, the population that year was 46,710. The metropolitan area with the surrounding communities of Sauk Rapids, Sartell, Waite Park, St. Augusta and St. Joseph comprise a larger population in the 100,000's.

Major industry includes mainly the health care system. Centracare corporation is home to a majority of St. Cloud's workers. Healthcare makes up 24.1% of the occupations, while 19% is retail trade. The median household income is $38,920. There are 92% whites living in St. Cloud, 1.8% are African American or Black, an 1.2 % are Hispanic. The remaining makeup is many different types of minorities.

Site conditions include a large water feature known as Lake George. It comprises 9 acres and the total park site is 25.65 acres. Vegetation has been dominated by human influence since the parks dedication in 1906. This includes many mature oaks on the south and east side of the site. There are also many coniferous trees scattered around the perimeter of the site. Around the lake and a demonstration pond are natural grasses and flowers that have been re-introduced by the conservation committee. The majority of the site is covered with mowed grass. The site is also very flat. It is in a low lying area with some hilly landscapes around the outlying areas. Standing structures include mainly the Municipal Pool and the attached Pool house. Also on the East side of the lake is the old warming house used for storing ice skates and concessions in the winter, as well as a picnic shelter on the extreme Northeast corner of the site. Wind speeds are relatively low on average. The yearly average is 8.3 miles per hour. Winter winds generally come from the North West and summer winds tend to come from the south.

Soils in Stearns county consist of 14 different types. This area is comprised of mostly glacial till, outwash plain, and St. Croix Morraine.
Environmental issues include the re-introduction of natural grasses and plants discussed in the project justification section. Preserving what steps have already been taken will also be important. Acoustically, this site will be somewhat of a challenge. The major concern is the high traffic that is constant throughout the day on Division Street and 9th Avenue South. These two areas are main arteries in the city. Although being at the site is relatively quiet.

E. Emphasis

The main components of emphasis for this project will be adaptive re-use, library design, aquatic center design, and the sociological aspects of the convergence of two different typologies.

The historical pool building will be preserved and adaptively remodeled to capture its historic importance. Parts of the old pool structure such as pool tiles and hand rails will be reused in the new aquatic center to create a unified theme.

Library design for urban areas will be the emphasis for precedents. The site and parking issues will serve as a challenge. The city uses the current library for many functions and new functions will be included in the library program to incorporate elements from the site and the location of the high school.

The outdoor aquatic center will create a new place for people to gather and enjoy the area. The aquatic center will combine with the current structure to form a new center of recreation. The aquatic center will house many water features that modern aquatic centers now use.

I. Plan for Proceeding:

a. Definition of a Research Direction:

Research into case studies of both public libraries and community aquatic centers will have to be accomplished. The concept of a community center or

a community focal area will also need to be researched further.

b. Design Methodology:

Case studies will be the best example of how this project will come together. The principles of community and the social aspects of bringing all people together in one center will also be a focal point for research. A major goal for the library is to use this building as an example for the city of how sustainable techniques and land reclamation can be beneficial for everyone.

c. Documentation of the Design Process:

Process is the most important aspect of design. Documenting process will range from sketching to 3-D modeling. The preliminary design solutions will be roughed out in sketches and other design. An adequate model will also prove to be helpful in understanding conceptual relationships. Final documents will be those that convey the design solution in the best manner. Weekly and daily sketches will be most beneficial in the process continuum. A detailed sketchbook will be kept as well as other notes and digital documents. Case studies will be kept simple and analyzed throughout the process.

d. Schedule and Work Plan:

R 07 Oct.	Thesis Proposal Due
F 15 Oct.	Travel to site and acquire site and other local info
R 21 Oct.	Primary and Secondary Critics Announced
R 28 Oct.	Last Day of Arch. 561
F 29 Oct.	Review Final Design Arch. 571

R 11 Nov.	Veterans Day – No School
F 12 Nov.	Arch. 571 Projects Due!
W 24 Nov.	Draft of Program Due to Primary Critic
R,F 25-26 Nov.	Thanksgiving Holiday
29 Nov.-06 Dec.	Develop Program Research Case Studies
R 09 Dec.	Final Program Due to Primary Critic
13-17 Dec.	Finals Week
T 11 Jan.	Classes Start Schematic Designing and Weekly Reviews start
M 17 Jan.	Martin Luther King Jr. Holiday
T 01 Feb.	My Birthday Begin 3-D modeling and site development
M 21 Feb.	President's Day Conceptual and Schematic De signing Design Development
14-18 Mar.	Spring Break (!) Begin Presentation Drawings and Modeling
M 21 Mar.	Continue Presentation Drawings and Final Presentation Material and design refinement
25-28 Mar.	Easter Holiday Presentation and last design de velopment phase

1-24 Apr.	Presentation Design and Layout and Modeling Finalization
M 25 Apr.	Thesis Projects Due! 4:30
26-27 Apr.	Thesis Exhibit in Memorial Union Ballroom
28 Apr.-05 May	Final Thesis Reviews
F 29 Apr.	Draft of Thesis Document Due to Primary Critic
F 06 May	Last Day of Classes
9-13 May	Finals Week
R 12 May	Final Thesis Document Due 4:30
F 13 May	Commencement!

e. Previous Studio Experience:

Fall 2001 Milt Yergens
Additive/Subtractive Study of Space

Wall Study

Room Study

Urban Infill, Fargo, ND
Spring 2002 Phillipe D'Anjou
World Trade Center Redesign

World Trade Center Park

A Personal Space

Denmark School

Pedestrian Bridge Charette

Fall 2002 Steve Martens
Fort Abercrombie Museum

St. Cloud Regional Airport

Spring 2003 Mohammed Elnahas Experimental Theatre Chattanooga
Masonry Competition: West Acres Bank

Fall 2003 Cindy Urness Mark Barnhouse
Josh Walters

Fargo Urban Design
Spring 2004 Don Faulkner HousingCompetition
Darryl Booker San Francisco High Rise
Fall 2004 Vince Hatlen
NDSU Hotel and Conference Center

f. Reference List/Resources:

Sources I expect to gather information from include case studies, St. Cloud city officials, the Stearns County History Museum, St. Cloud Public Library, St. Cloud Public Library Planners, interviews, and my own personal observations and experiences at the site.

g. Bibliography for this Document:

Census 2002 Summary File Sample Data. U.S. Census Bureau. Retrieved October 5, 2004 from http://www.census.gov/

Climate Data Tables. National Oceanic and Atmospheric Administration.
Retrieved October 5, 2004 from http://www.noaa.com

Lake George Shoreland Restoration Project St. Cloud, MN. United States Department of Agriculture Natural Resources Conservation Service. Retrieved September 15, 2004 from http://www.mn.nrcs.usda.gov/programs/lake_george.html

Post, Tim. (2004, August). Minnesotans Dive Into New Pools. Minnesota Public Radio. Retrieved September 20, 2004, from http://news.minnesota.publicradio.org/

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Schumacher, L. (2004, June 22). Library needs new home, city wants your thoughts. St. Cloud Times. Pp. A1, A5.

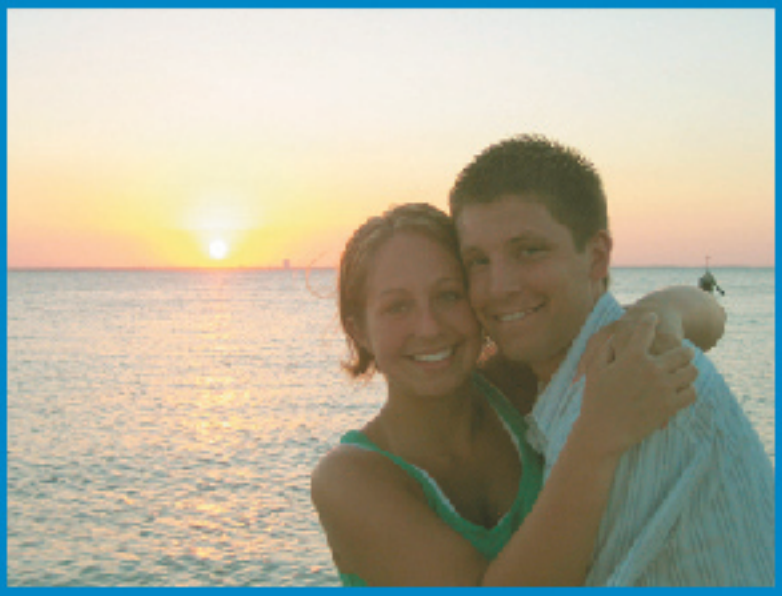
St. Cloud Public Library Site Selection. Great River Regional Library. Retrieved October 5, 2004 from http://www.griver.org/needanalysis/

h. site photos

Photo showing the current Municipal Pool. 8/19/04.

Photo looking North across the site towards downtown St. Cloud. 8/19/04

Topographical Photo from USGS showing the lake at top center and the rest of the site south of the lake.



Thanks to all family and friends
who helped me reach my goals!

~ Bree