A New Adventure

Encouraging people to go out to discover American history through architecture and the environment that surrounds it.

Ben Johnson
A NEW ADVENTURE

ENCOURAGING PEOPLE TO GO OUT AND DISCOVER AMERICAN HISTORY THROUGH ARCHITECTURE AND THE ENVIRONMENTAL SURROUNDINGS.

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

By:
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In Partial Fulfillment of the Requirements for the Degree of Master in Architecture.

[Signatures]
Primary Thesis Advisor
Thesis Committee Chair

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<table>
<thead>
<tr>
<th>Table of Contents</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Tables and Figures</td>
<td>3</td>
</tr>
<tr>
<td>Thesis Abstract</td>
<td>7</td>
</tr>
<tr>
<td>Narrative of Theoretical Aspect</td>
<td>8</td>
</tr>
<tr>
<td>Project Typology</td>
<td>11</td>
</tr>
<tr>
<td>Case Studies</td>
<td>13</td>
</tr>
<tr>
<td>Major Project Elements</td>
<td>19</td>
</tr>
<tr>
<td>Client Description</td>
<td>20</td>
</tr>
<tr>
<td>Project Audience</td>
<td>21</td>
</tr>
<tr>
<td>Site Information</td>
<td>22</td>
</tr>
<tr>
<td>Project Emphasis</td>
<td>26</td>
</tr>
<tr>
<td>Goals of the Project</td>
<td>27</td>
</tr>
<tr>
<td>Plan for Proceeding</td>
<td>29</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>List of Figures</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------</td>
</tr>
<tr>
<td><strong>Thesis Program</strong></td>
<td><strong>Figure Number - Description</strong></td>
</tr>
<tr>
<td>Results from Theoretical Premise</td>
<td>33</td>
</tr>
<tr>
<td>Project Justification</td>
<td>34</td>
</tr>
<tr>
<td>Historical Context</td>
<td>42</td>
</tr>
<tr>
<td>Social Context</td>
<td>44</td>
</tr>
<tr>
<td>Cultural Context</td>
<td>50</td>
</tr>
<tr>
<td>Site Analysis</td>
<td>52</td>
</tr>
<tr>
<td>Performance Criteria</td>
<td>54</td>
</tr>
<tr>
<td>Program Appendix</td>
<td>72</td>
</tr>
<tr>
<td>Thesis Appendix</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>80</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Figure Number - Description</th>
<th>Page #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1 – Exterior Photo</td>
<td>13</td>
</tr>
<tr>
<td>Figure 2 – Graphic illustrating the building form</td>
<td>14</td>
</tr>
<tr>
<td>Figure 3 – Exterior Photo</td>
<td>14</td>
</tr>
<tr>
<td>Figure 4 – Exterior Photo</td>
<td>15</td>
</tr>
<tr>
<td>Figure 5 – Graphic illustrating the building form</td>
<td>16</td>
</tr>
<tr>
<td>Figure 6 – Exterior Photo</td>
<td>16</td>
</tr>
<tr>
<td>Figure 7 – Graphic illustrating the building form</td>
<td>17</td>
</tr>
<tr>
<td>Figure 8 – Exterior Photo</td>
<td>17</td>
</tr>
<tr>
<td>Figure 9 – Exterior Photo</td>
<td>18</td>
</tr>
<tr>
<td>Figure 10 – Vicinity map of the Crow Wing State Park</td>
<td>25</td>
</tr>
<tr>
<td>Figure 11 – Site Map of the Crow Wing State Park</td>
<td>26</td>
</tr>
<tr>
<td>Figure 12 – Schedule for Thesis</td>
<td>31</td>
</tr>
<tr>
<td>Figure 13 – Station 1 – Pawnee Campsite</td>
<td>36</td>
</tr>
<tr>
<td>Figure 14 – Station 2 – Wagon Cart</td>
<td>37</td>
</tr>
<tr>
<td>Figure 15 – Station 3 – Train Station</td>
<td>37</td>
</tr>
<tr>
<td>Figure 16 – Original Pits overlooking the River</td>
<td>45</td>
</tr>
<tr>
<td>Figure 17 – Marker at the pits</td>
<td>45</td>
</tr>
<tr>
<td>Figure 18 – River Crossing sign for the Ox Cart Path</td>
<td>47</td>
</tr>
<tr>
<td>Figure 19 – The Present Day River Crossing</td>
<td>47</td>
</tr>
<tr>
<td>Figure 20 – The Beaulieu Manson Overlooking the river</td>
<td>49</td>
</tr>
<tr>
<td>Figure 21 – Land Markers noting where building use to be</td>
<td>49</td>
</tr>
<tr>
<td>Figure 22 – Cuyuna State Recreation Area</td>
<td>50</td>
</tr>
<tr>
<td>Figure 23 – Bike Path at Crow Wing State Park</td>
<td>51</td>
</tr>
<tr>
<td>Figure Number</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td>Figure 24</td>
<td>Chippewa Lookout</td>
</tr>
<tr>
<td>Figure 25</td>
<td>Catholic Missionary</td>
</tr>
<tr>
<td>Figure 26</td>
<td>Vicinity Map</td>
</tr>
<tr>
<td>Figure 27</td>
<td>State Park Map</td>
</tr>
<tr>
<td>Figure 28</td>
<td>Entrance to Park</td>
</tr>
<tr>
<td>Figure 29</td>
<td>Visitor Building</td>
</tr>
<tr>
<td>Figure 30</td>
<td>Historical Boards and Map</td>
</tr>
<tr>
<td>Figure 31</td>
<td>Campground</td>
</tr>
<tr>
<td>Figure 32</td>
<td>Amphitheater</td>
</tr>
<tr>
<td>Figure 33</td>
<td>The Missionaries</td>
</tr>
<tr>
<td>Figure 34</td>
<td>District One School Site</td>
</tr>
<tr>
<td>Figure 35</td>
<td>Ferry Crossing</td>
</tr>
<tr>
<td>Figure 36</td>
<td>Chippewa Lookout</td>
</tr>
<tr>
<td>Figure 37</td>
<td>Picnic Area near the River</td>
</tr>
<tr>
<td>Figure 38</td>
<td>Boardwalk and Land Markers</td>
</tr>
<tr>
<td>Figure 39</td>
<td>Platform Overlooking the Town</td>
</tr>
<tr>
<td>Figure 40</td>
<td>Looking South at the Site</td>
</tr>
<tr>
<td>Figure 41</td>
<td>Existing Parking Area</td>
</tr>
<tr>
<td>Figure 42</td>
<td>Proposed Site</td>
</tr>
<tr>
<td>Figure 43</td>
<td>Annual High and Low Temperatures</td>
</tr>
<tr>
<td>Figure 44</td>
<td>Monthly Precipitation</td>
</tr>
<tr>
<td>Figure 45</td>
<td>Yearly Wind Rose</td>
</tr>
<tr>
<td>Figure 46</td>
<td>Soil Map Showing Slope and Soil Types</td>
</tr>
<tr>
<td>Figure 47</td>
<td>Vehicle Traffic Map</td>
</tr>
<tr>
<td>Figure 48</td>
<td>Pedestrian Map</td>
</tr>
<tr>
<td>Figure 49</td>
<td>Existing Building Map</td>
</tr>
<tr>
<td>Figure 50</td>
<td>Watershed Map</td>
</tr>
<tr>
<td>Figure 51</td>
<td>Topography Map</td>
</tr>
<tr>
<td>Figure 52</td>
<td>Spaces and Sizes</td>
</tr>
<tr>
<td>Figure 53</td>
<td>Space Matrix</td>
</tr>
<tr>
<td>Figure 54</td>
<td>Spatial Diagram</td>
</tr>
<tr>
<td>Figure 55</td>
<td>Historic Town of Old Crow Wing</td>
</tr>
<tr>
<td>Figure 56</td>
<td>Historic OX Cart Path</td>
</tr>
<tr>
<td>Figure 57</td>
<td>Historic OX Cart Path</td>
</tr>
<tr>
<td>Figure 58</td>
<td>Historic OX Cart Path</td>
</tr>
</tbody>
</table>

**List Of Figures**
**THESIS ABSTRACT**

Architecture can be a tool that helps to draw people into a space in order to promote historical learning.

There are towns and historical places all over the country that currently do not have a space that allows for historical learning. Without these places of learning the history and knowledge tends to die off disappearing as time goes on. A place of historical learning would be able to help with this problem. It would give a chance to tell stories that happened in the past.

People need to be able to come learn about the history and culture of that place. Visitors need to be drawn to places of historical presence because often times the place is not well advertised or is hard to get to.

The project will focus on a historical and cultural center located on one of Minnesota’s State parks in order to increase the amount of visitors to the park. State parks are known for their natural beauty but what most people don’t learn about is the history and what makes that particular site a state park. This building will promote the history of the site creating a positive learning experience while severing as a place for visitors to enjoy at all times of the year.

Keywords: Historical learning, Positive learning, Attraction to a place
There is no doubt that today's technology has helped people in order to learn about history and see artifacts all across the world at the touch of a button. But it is still important to see the real thing because then you are able to see details that a photo can't provide. You are able to see depth, shade and shadows and get an idea of how it was made. Seeing the object up close gives you an understanding of how that object was used and what purpose it had. You are able to find beauty and value in the object.

Getting people to see that object is a different task, how do you draw people into a small town that no longer is standing to learn about artifacts that used in that town? How can you promote the learning environment for people with a building? These are some of the questions that I have been asking. I want to be able to create a building that draws their interest to learn about a forgotten town.

The only building left in the town of Old Crow Wing is the oldest still standing that is north of Saint Anthony Falls. At one point in time that was not the case, it use to be a booming little town where many different traders and travelers stopped at.

The state park that is currently at the site offers lots of different hiking trails in which follows along the old ox cart trail. But the only information that talks about the history of the site is some simple signs that are old and weathered. They talk about the town and the different people that traveled through it as well as the artifacts that have been found on many different occasions, but they are not on display. This type of learning is hard because many people do not want to read the long sign explaining the history, especially kids. I hope to solve this problem creating a building that offers a positive learning environment.
The building shall draw people in from across the country in order to visit the park, learn about the culture of the previous settlements and to teach them about the history of the area.

The new building for the Crow Wing State Park will serve many different functions, but will focused around three major typologies; a visitor center, a historical center and a learning center. The challenge with these typologies is that they are often found in large cities and naturally draw people in, one of the issues that I face is that I need to look at more rural buildings.

Buildings that closely relate to this building would be history and cultural centers that offer a positive learning environment. The learning type would be similar to a science center or museum that promote learning about our history. Another similar typology would be presidential libraries because they are often placed in small towns where the president was born and made a significant impact. It is drawing people in that would not normally be traveling through the city in order to come and visit the library.

The landscape surrounding the building will be able to offer the experiences of how times were like when the old town along the Crow Wing River. People will be able to travel the old ox trail that carried supplies from the river, walk on the old streets of the town. Access to the river will allow for a different perspective, people will be able to learn about the native Americans that once populated it. The existing site already does a good job of giving people access to the historical sites, and that should not changed but instead be emphasized more.
The Craig Thomas Discovery Center lies to the entrance of the moose area in the Grand Teton National Park, and is settled between a riparian forest and sagebrush meadow. You enter the building from the south where there is a courtyard. The courtyard is at a small scale, that doesn’t make people overwhelmed as they enter the space this is done by sloping all the roofs back to the courtyard. As you stand in the courtyard you are able to get a great view of the Teton Mountains and the roof peaks reflect the mountain peaks and valleys.

Inside the building the space is suppose to feel like you are standing in a forest, the giant columns represent large trees. The glass is tilted in a way that takes on the shape of a conifer trees along a row because conifers are wider at the base than at the top making a triangle shape. There are forms on the interior of the building that hold information as well as serving as furniture. These are made to represent the jagged edge of the Tetons. At the center of the building lies the fireplace which gives the building a heart. The chimney is made of board formed concrete so it still gives a connection to the landscape for the people to see when they visit the visitor center.
The Craig Thomas Discovery and Visitor Center was a six-year project that was completed in 2007 and was designed by Bohlin Cywinski Jackson. The project is 23,000 SQ. FT. that is made up of gathering space, information center, administration office, bookstore, gallery space, exhibit space, and classroom space. The project has also a number of awards, including many different AIA honor awards, and Green Good Design award.

What this project does for me is to show me how a remotely located building can attach people. Grand Teton National Park is known for its great landscapes, and the visitor center is able to grab people when they first enter the park in order to inform them about the park. The environment inside the building is does not separate the from the landscape but rather reflects on the landscape and bringing it inside. People are then able to walk along the “mountain tops” and “down in the forest” because of the forms that are on the inside.

This graphic shows how the buildings roof follows the mountains to the north and the roof does not get in the way of the natural views.

Craig Thomas
– Discovery and Visitor Center

Mont – Tremblant National Park
Monroe Lake, QC. – Canada
Smith Vigeant Architects

The Discovery Centre lies at the entrance to Tremblant State park, and serves as a “welcome cabin” for the visitors that come to visit. The building made to serve as many different functions for the park, in order to promote learning in the celebration of nature. One of the main features of the building is the amphitheater which also for many different large group talks to be held. Some of the addition spaces that the building provides are a discovery zone and service facilities.

The large roof acts as a trees canopy, protecting anything that may be under it. And just as there are holes in the canopy where the leaves do not cover there are clear stories where two different roof pitches come together. The whole building is wrapped in dark wood and then the interior wood lightens up, which is just like a tree. The bark on the outside is dark and at the center of the tree lies the light wood.
CASE STUDIES

THE RIO TINTO CENTER

– NATURAL MUSEUM OF HISTORY OF UTAH

FOOTHILLS OF THE WASTACH MOUNTAIN RANGE

SALT LAKE CITY, UTAH – UNITED STATES

GSBS ARCHITECTS/ENNEAD ARCHITECTS

The Natural Museum of History in Utah is truly an amazing building. The design of the building takes natural world around Utah and shines light on it through the use of historical learning, human engagement, cultural experiences and educational programs. The building form comes from the jagged edge of the mountains that are found in Utah, and is set back into the hill so as to not to protrude the views of the natural landscape. Even the exterior panel material takes shape from the landscape representing different sediments piling up over time.

The interior spaces of the building also reflect the natural landscapes found in Utah. The paths inside the building represent the switchbacks along the Bonneville Shoreline Trail. And the most impressive part about the building is the public open that is meant to represent Utah’s canyons. Instead of having large canyon walls on either side you are surround by the two gallery spaces, one to the North and one to the South. The graphic below is an example of this, the area in orange is the canyon walls and the area in red it the open space.

The Discovery Centre was created in 2014 by Smith Vigeant Architects. This is know as the “welcome cabin” and totals 6,450 SQ. FT. which is made up of a reception area, public restrooms and the amphitheater. The building has won six design awards in Canada that range from Durably’s Architecture Design Award to The Quebec Steel Design Award of excellence.

What this project does for me is to provide an example of just a simple entrance building to a park. This buildings program is very simple, consisting of only a few different spaces but in those spaces they often serve as many uses, changing as the people see fit. The Discovery Centre blends in with the landscape, using the roof forms to make hills and valleys, the wood materials blend in with the forests that surround the building and the amphitheater has a dirt floor to it. Lastly the building is a great example of being an energy efficient building. It incorporates hydrothermy, which helped to reduce the total energy use by 59%.
The Rio Tinto Center – Natural Museum of History of Utah

The Rio Tinto Center was completed in 2011 by GSBS Architects and achieved LEED Gold. In total the building is 163,000 gross square feet that is made up of exhibit galleries, temporary gallery spaces, multi use spaces, lecture space, classrooms, research laboratories, offices and visitor information. This building has done a really good job with creating a building that does not take away from the landscape that but instead embraces it. Allowing the building to form around it and take elements from it.

What this project does for me is to show me how spaces in a building like this can be creatively laid out in order to reflect the landscape. Being that this building is trying to represent the Utah landscape, it almost provides an experience of going and digging up the artifacts that are inside. This is an interesting concept to explore because it gives the people visiting a stronger experience in order to learn about the history. It also show how a variety of spaces are able to come together in order to create one building. This will be important for when it comes to programing for my building because a lot of the spaces that this building has I can incorporate them into mine. What will be different about my building will be the scale of the building, it does not need to be this large because I am concentrating on a smaller area.

The existing state park already includes many different elements that can be incorporated into the project, but the building will bring those elements together.

The first element that will need to be created is the historical center that with house all the artifacts and will be create the new center for the park. The building should integrate with both the land that it sits on and the artifacts that it represents.

The building will need to accommodate for the publics use so all of the spaces should be open for use to them. This is not to be served as an office space for the park staff but instead be open for visitors during park hours. The building and the exhibits should be supported independently so that way there does not have to be a person there going over all the facts of the site. Although there should be a knowledgeable personal there in case there may be any questions that do arrive

Major spaces that need to be included on the building:  
The Visitor Center Should Includes:  
Information Center  
Gallery Space(s) for artifacts  
Interpretive center for engaging people  
Historical Learning Environment  
Public Restrooms  
Mechanical Space  
Storage area (for additional exhibits)  
Additional Parking

Another key piece to the project will be highlighting the outdoor elements that are apart of the exhibits. There is an island across the river that had a signification impact on the town when it was there, exploring an option to connect those two would have great historical impact on the site. It would create another learning opportunity for the visitors and expand their time line of knowledge of the site.
**PROJECT CLIENT**

This project will be built for a variety of people but there will be a few key players that will be the primary client for the design.

Being that the state park is managed by the Minnesota Department of Natural Resources they would be the primary client and point of contact. They would be the ones managing the building once it is complete so I would want to work closely with them in order to make sure the project works best for them. The owner of the building would be the state of Minnesota and any decisions that would need to be made would also need to go through the State of Minnesota, as well as Crow Wing County. The current park manager is Steve Weber and he should be my major point of contact for the project.

**PROJECT AUDIENCE**

My main audience for this project is people that want to learn more about the area of the Crow Wing Park as well as people that may not know anything at all about the park but love learning about history.

The current state park offers a lot to do for everyone that visits it offering camping, hiking, canoeing and fishing. This attacks many outdoor enthusiasts wanting to see what northern Minnesota has to offer. But often people drive right by the state park not noticing the gems that lies in the woods. I want to grow the audience of the park so that more people are able to learn about the extensive history that the park offers in addition to the natural landscapes that have developed since the town Old Crow Wing died out.

Many of the people that visit the state parks are families that have children of all ages. So creating a space that can accommodate and entertain people of all age groups will be important. As well everyone that visits the park may not be from the area so making sure that people are able to understand the exhibits no matter way they maybe from.
The idea of a museum can be applied to many different landmarks that are located across the country but for this project I have picked Minnesota’s State Parks because I feel that their history is not well known.

Minnesota is home to 67 State Parks, 62 State forest campgrounds and 9 recreation areas. This makes it an outdoor enthusiasts dream place to be. Each of the parks offer different experiences for people to take in. There is one thing in common with all the State parks, they are in place because of an historical event(s) that changed Minnesota.

Crow Wing Country is home to two different State Parks, Cuyuna County State Recreation area and the Crow Wing State Park. The State Parks offer extensive nature walks that people are able to use for biking or walking. Both of these parks have significant historical presences that are important to the Brainerd Lakes Area. That history includes the mining industry, the railroad and an old settler town that no longer exists.

The state park is full of wooded forests that have grown back over time. Hiking trails weave through the forests and following many of the old trails from the town. The river has not changed much over time, although it no longer serves as a landing point for the travels but instead as a point of interest for people to navigate in boats.

The Crow Wing State lies at the intersection of the Crow Wing River and Mississippi river just nine miles from Brainerd MN. The town of Old Crow Wing is no longer standing but at the time it was a major landing point back in the 1800’s. Today what remains of the old town is only one remaining building, which is the oldest standing structure north of Saint Anthony Falls, and a series of ox cart trails.
The state park mainly lies on the east side of the Mississippi River but it also includes land on the west side of the river. It also includes the Crow Wing Island that is at the center of the Mississippi and Crow Wing Rivers. There are no bridges that cross the river to get to the other parts of the park so it requires you to drive around the river.

The Crow Wing State Park offers an abundant of active for all people including hiking trails, camping, canoeing, fishing, and wildlife observation.

The park offers a number of active for people to enjoy any time of the year. There is the 18 miles of hiking trails that weave through the forest, and is a great opportunity to take in the scenic views along the Mississippi river. Those trails also take you by the historic town site of Old Crow Wing, and the Battle of 1768. There are no tours offered by the park so the park has placed many signs up indicating where to go and the history of the site.

There one of the walking paths also serves as a paved bike path that is apart of a large system of trails. Crow Wing State Park is the current southern most point of the Paul Bunyan State trail, that stretches 115 miles, from Brainerd to Bemidji.

Another amenity that the park offers is camping, and they offer 59 different sites. Most of the sites are just a simple site that include a picnic bench, fire pit and tent pad; other sites offer electric hook ups. There are toilet facilitates on the park, but some of the them are only open during the summer months.

There is a park office at the entrance of the park that offers visitors information and maps on the park. It also offers some items like ice, firewood, and some small gift items. The park office is only open during times when the park is open, which is seven days a week.

For other amenities visitors are able to make a short drive to Baxter or Brainerd, which is less than five miles away.
**Project Emphasis**

The site is full of history and is a hidden gem in the Brainerd area, so how do you make a building that highlights that history.

The project will need to emphasize on the historical events that happened over the years at the site. It will have to explain the events that went on over time and the impact that they had. There needs to be a promotion of learning in the building so that way people don't just pass through the exhibits they stop and actually learn.

So the questions that I raise is what makes people stop at an exhibit? What makes people stop at a particular building? Do people go out of their way to learn about a particular subject matter.

Since there is only one building left on the site there will need to be a strong connection to the land. There are still some elements left of the town, and what this project could do is to point out those objects, make them well know so that people know what they were used for. I do not want to recreate the old elements of the town but rather make them known.

The main emphasis is for people to be able to learn at this site. To find out things that they may not have know about their town, state or country.

**Goals of the Project**

One of the major goals of this project is to learn why people are attracted to the sites of historical value, and what makes them go into exhibits. I want to learn why people are attacked to parks and landscapes, what makes them want to go out of their way to see them. I want to learn what makes people attacked to Minnesota, and what makes them want to come back. In simple terms my goal for my research is to find out what makes people drawn to a space, and what makes them want to come back to the space.

Another goal of the project is to create learning environment that is positive in which people are able to take away information that is presented at the site. And is there a difference between historical learning and learning, and what ways work best currently. Is there something that should be changed? Part of my research that I need to then conduct is what learning environments do people best learn in. I want people to absorb the information that is present it and then be able to relate it back into their own life.
GOALS OF THE PROJECT

ACADEMIC GOALS
There are many personal goals that I have currently but for this project specifically I have a few.

1. Prove my knowledge of my academic work
2. Learn new knowledge of my research topic and apply it in a way that could also be used in for professional work
3. Learn to do some accurate pricing for buildings in order to keep the cost of the building down
4. Learn to work fast in the design process in order to complete tasks ahead of time

PROFESSIONAL GOALS
Some of the professional goals that I have for this project are:

1. Produce work that is to the best of my ability
2. Clearly define the problem of the project and prove that the building I create is a solution to that problem.
3. Make sure that my ideas are clearly defined
4. Detail the building in a way the is complete

PERSONAL GOALS
There are many personal goals that I have currently but for this project specifically I have a few.

1. Prove my knowledge of my academic work
2. Provide work that uses my knowledge that I have learned while in school
3. Make sure that I stay on track with the schedule that I set following this step.
4. Complete all the step that are listed

PLAN FOR PROCEEDING

THE PROJECT WILL NEED TO EMPHASIS ON THE HISTORICAL EVENTS THAT HAPPED OVER THE YEARS AT THE SITE. IT WILL HAVE TO EXPLAIN THE EVENTS THAT WENT ON OVER TIME AND THE IMPACT THAT THEY HAD.

Furthering in this project investigations will need to be done looking at the site and the research that I would like to explore. I have already been to the site but I would like to go back in order to spend more time. Taking photos of the historical sites and making an accurate map. I would also like to talk to the manager of the park, to see if he has more information about it. I would also like to talk to manager about the history of the site, getting more information on what happened at the town.

The main part of my research is to investigate what attracts people to historical sites and how do they historically learn. I need to start looking into articles about historical learning and determine how it is different than learning. Looking at articles and experiments that people that have done already. I would like to also to create survey questions for people asking them what attracts them to state parks, historical site and even Minnesota.

Another way I can do the research is to look closely at current historical centers or museums and observe what makes them successful. As well visiting some of those site that I look into and observe people, see what they are doing and where they are going.
**Documentation:**

As apart of the thesis there will be a lot of documentation, what my project will first consist of will be documenting the research that I find in my investigation. That will me looking at the at history of Old Crow Wing and the area that is the state park. Talking to the park manager will be helpful in order to lead me in a direction where I can find more historical information.

As far as the research of the project, similar documentation will need to happen. Citing people work that they have found while investigating. Some of the work will be my own, analyzing different exhibits and how people interact in different spaces. As apart of my inventory work when I talk to people and ask them questions about historical site and state parks that information could be numerically valued. Putting a value to each answer that is said and then taking that information and placing it in a graph form where it can be analyzed.

**Deliverables:**

**PROJECT BOOK**  
Book of process

**PROJECT BOARDS**  
Representations of the project

**PHYSICAL MODELS**  
Models of the Site  
Models of the Building

**PRESENTATION**  
Oral and graphic

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![Figure 12 - Schedule for Thesis](image-url)
a process leading to the statement of a design problem and the requirements to be met in offering a solution.
In order to strengthen the historical understanding in students it is important to show students “stuff” from the past. This “stuff” is evidence that the students are then able to hold and examine as they explore what the items are, and it also gives them the opportunity to ask questions about the history about the “stuff.” These objects should be actual artifacts, photographs and documents from the topic that is being taught. Exploring these artifacts gives the opportunity for students to dive deeper into the history, and in turn ask questions to the teacher about how the artifact was used, what was its purpose, and how it was made.

One of the problems with needing “stuff” in order to teach students effectively is having the stuff to hand out to the students. This is especially difficult for preservice teachers as they may not have any artifacts to start with. Wunder tells her students that there are two solutions to the problem “The first solution involves an expenditure of their time and attention. Throughout their careers, teachers accumulate historical and other “stuff” from their own attics, garage sales, catalogs, and shops. The second solution is to make use of collections housed in museums. The point of social studies and museums intersect at that point.” (Wunder, 2002) Museums focus on “stuff” that is located around the world and often offer specialized objects or relating to a whole era in time. Those objects then represent culture and nature becoming the focus of educational efforts which cause a shift from written literature learning to active participation.

Based on the findings that Wunder found from the many case studies she then decided to teach her findings to her students and then have the students apply them in real world situations as a preservice teacher. In the town of Lincoln Nebraska there is the Museum of Nebraska History and many different school children often take trips to the museum. The Museum recognized that the students benefited from learning in a hands-on environment and it added to their study of history. So, in 1997 the museum opened an adventure center for the children and highlights four times in Nebraskan history.
The first exhibit was a summer campsite dating back the 1500's and involved setting up a tent, scraping buffalo hides, mashing corn and wearing clothing form that era. The second is a farm scene that involved a wagon and general store to recreate what it was like traveling across the prairie in the 1800's. The third site was a train depot that was to represent people coming to the area in the early 1900's, the exhibit included luggage complete with clothes, belongings and family items. And the final exhibit is the camping scene with a car that is supposed to replicate tourist as they travel to Nebraska. The one thing that unifies all the exhibits is they all involve people and the different modes of transportation as they travel to Nebraska to spend time.
This research is important to my project because it is an example of a study that was done to show what works best for students learning habits. This also works for my premise that people tend to learn better when they work hands on. The work was not only done by the children but it was also done by the teachers. They found that working hands on helped them to learn the subject. It has also shown me that this building could work for just more than the DNR, schools from the area could come to the site and visit the building. It would then give them a chance to learn more about the area in which they live in. These are some of the top take away’s I found from reading this report.

1) Create spaces that all children can play in and be apart of.
2) Make sure that the different scenes involve real or replicated artifacts.
3) Have a period where the students can all come together and talk about the different topics

In all this report has given me more insights in what are the best ways for people to learn in historical environments.

Wunder and her preservice teachers were then invited to the museum and granted permission to work with visiting students in the different exhibits. The preservice teachers would be given one hour with a group of students and act as a facilitator. The preservice teachers would be given the same materials as teachers would be given when they would bring their students to the museum and where in charge of teaching the students about the exhibits and the history behind them. The preservice teachers then developed a series of questions that pulled from the child’s previous knowledge as well as asking them questions relating more towards the exhibits they were currently at. Each of the preservice teachers got a chance to work with at least two groups of students that ranged from three to seven students.

After working one session the students were asked to then write reaction papers of what their experience was working with the students. Wunder then asked the students to reflect on the “student’s engagement at the station, the nature of their conversations, their perceived prior knowledge, and their historical understanding,” (Wunder, 2002) They were also asked to about how hands-on experiences can help a student learning in history. Many of the conclusions that the preservice teachers stated is the students were actively engaged in the exhibits and the activities that they were doing. The students would rush over to the exhibit and would dig into all the parts of the exhibit.

Once the preservice teachers gave the students their tasks on what to do as well as explaining the history of the site the students would race off to investigate the scene. In the experiments the preservice teachers noted that the students would do activities that they were familiar with like setting up the tent rather than grinding that corn. The preservice teachers also noticed that many of the students would work together to set up the tent and enjoyed doing so. When the children were asked questions that were not related to the scene, often the younger students would focus on the procedure. But when students were asked about their ancestors, they related the stories to the scene. In the end the preservice teachers did not find their prepared questions helpful because they were so engaged into what was happening in the scene.

There were a few issues with the experiment that came up later in the paper and it has to do with the amount of time that was spent at the scenes and the importance of having a follow up discussion about the scene. Students stated that “they got a lot out of them, but they would get so much more if they were given more time to experience longer.” (Wunder, 2002) Overall the preservice teachers thought that experience was great for the students because it allowed for them to touch and hold apart of history, for a better understanding.

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The research that was done for this project was useful for my thesis because it gave me two sides that I need to keep in consideration when designing my building. It also provided me with answers that I am trying to solve in my thesis. The two articles that were highlighted are from different time periods and are different subjects but together they will help to influence my thesis.

The article that was written by Susan Wunder was a very beneficial article for my project, because it gave me insight from a different perspective that be a teacher. She was able to define the problem and find the solution for that in her experiments. The data that was collected from the project, I will be able to apply into my special layout. The one thing that this research did not solve for me was, how well does this apply to adults. Can it be assumed that the same principles that were used for the school children be applied to adults? That is still something I need to investigate into farther.

The data from Gensler gives me a different perspective, and instead of looking at the present of what this building will be, looking towards the future as to what the building may change into to. The points that were listed gave me a view of how the building could change in years come, or how the movement of an exhibit could impact a different one. This also helped me to give perspective on how this building could serve many different purposes.

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**Gensler Research**

Gensler’s Research team did a roundtable event that talked to many different people about the future of museums. This was done to discuss and develop new ways for getting people into the museums and getting them excited about the content inside. The discussion came up with eight key points that should be embraced when thinking about museums for the future.

1. Crafting Personal Journeys
2. Entertainment Based Experiences
3. Need for Flexibility
4. Seeking Community Engagement
5. The Blurring of Boundaries
6. Tourist Needs vs Local Needs
7. Embracing the Urban Scene
8. Online vs Offline Presence

These are key components to think about when creating community spaces for the future in the changing environment.
History is a way of learning and it is important to our society because we can learn from the past. Things that our ancestors learned in the past can be vital in the future. I feel that it is one of the hardest subjects to learn in school because most of the time it involves reading, but what says it cannot be interactive? Children could work with their hands to create objects that they get to keep, and that can get them excited about learning how things were done in the past. But then how do you also keep other people interested in the exhibits that are normally in a museum? These are all vital questions to ask but why is this important to my project or even or society. It all falls under the category of learning that helps with our development and knowledge.

This is important to do in my academic development currently because I can discover how people learn and what attracts them to a site. This information can be important to use during my professional career because I can use the information and apply it to real world situations. This will expand my knowledge on how people best learn in a historical environment, as well as what attracts people to a historical site. This is important to my professional development because it will incorporate all aspects of a project and allow for the development of many different parts of a program. I will develop and refine a program that will work for the clients use. This will add to my skill set of the beginnings of a project and some of the background information that needs to come about. This also gives me a chance to work on the beginnings of a project and develop it into a building that could go to the next phase, becoming a built building.

In the end I will be able to demonstrate my abilities that I have learned in class by presenting a building that embraces the history that it is surrounded in. It will connect to the landscape while at the same time embracing the emphasis of the state park. The building will be detailed in a way that presents all my finding while I have been at school. It will also embrace my research in which I explore learning objectives and how people successfully learn, people young and old will be able to take something away from this building. If a person can walk away from this building and learn more about the park and why it was put in place, I feel that it would be a success.
The Crow Wing State Park is known for being the landing point for the major trade routes in the mid–1800’s, but its history goes back further than that.

The Crow Wing State Park is known for being the landing point for the major trade routes in the mid–1800’s, but its history goes back further than that.

The name Crow Wing has some controversy around it. Most people agree that the name of the town, county and state park comes from the name of the river. It is said that the name of the river comes from the island that lies at the center of Crow Wing and Mississippi, because it is shaped like a crow’s wing. Some say that it is a mistranslation for an Ojibwe word that means raven or raven feather. And lastly it is said that it could come from Little Crow Chiefdom who was a part of the Dakota.

Being that the Crow Wing State Park Lies at the intersection of the Mississippi River and the Crow Wing River it is an easy point to travel. It was first inhabited by the Dakota Native Americans for its use of the travel routes and ease of hunting. But as it is told, in the year 1768 that changed.

While the Dakota made camp on the Island at the intersection of the two rivers, the Ojibwe had made their way further west, making camp on the east bank of the Crow Wing River. One day the Dakota War Party raided the Ojibwe Village and took many women and canoes. The Ojibwe men went to high ground and dug shallow pits in the ground. When the Dakota passed below them they were able to ambush them. The point at which the Ojibwe fired upon the Dakota is now known as the Chippewa Lookout, and you can still see some of the pits.

The woman overturned the canoes that they were traveling in and swam back to shore. The Dakota regrouped and tried another attach on the Ojibwe but after a two battle the Ojibwe pushed the Dakota out of the area, taking control of the land and Mississippi Valley.

Something interesting about the area is that historical accounts stat the Ojibwe name for the area is Neen–gi–tah–witi–gway–yang, and then translates into “a place of separation.”
The first European fur traders began settling the area in the late 18th Century.

The first European fur traders began settling the area in 1767. Trappers would make camp on the banks of the river in the fall months and trap until winter began before heading back down the river till spring. Occasionally there would be a trapper that would decide to stay in camp during the winter months. William Warren in his book “History of the Ojibwe People” told a story about a trapper wintering in camp.

As an illustration of the kind and abundance of animals which covered the country, it is stated that an Ojibway hunter named No-Ka, the grandfather of White Fisher, killed in one day’s hunt, starting from the mouth of the Crow Wing River, sixteen elk, four buffalo, five deer, three bears, one lynx, and one porcupine. There was a trader wintering at the time at Crow Wing, and for his winter’s supply of meat, No-Ka presented him with the fruits of his day’s hunt. This occurred about sixty-five (1787) years ago, when traders had become common to the Ojibway’s of the Upper Mississippi. William Warren, 1852 – History of the Ojibway People.

Some of the well-known French traders that frequented Crow Wing as early as 1750 included Joseph Marin and Joseph LaVerendrye. In the late 1700s James McGill, Jean Baptiste Perrault and Gabriel Attina made camp at Old Crow Wing and did business in the area.

It was not till 1823 when a permanent trading post opened on the banks river. Allen Morrison operated the post and later in 1840’s he also ran the ferry, that was north of town, that crosses the Crow Wing River. From that point the town of Old Crow Wing began to grow slowly. Many trappers in the area used the rivers as their main source of navigation traveling up and down until the Red River Trails came about.

And in 1844 the Woods Trail made a stop in Old Crow Wing, which helped the town grown very rapidly. The Red River Trails were a series of Ox Cart trails that connected the Red River Colony to Fort Garry in British North America. A few of the routes followed the Red River, and the Mississippi River. Travelers used the ferries and could cross the river for about 25 cents, although at other crossings in the trail that was not the case. Many crossings were muddy, and carts often got stuck or the strong currents washed away carts that tried to cross. The Red Trade was important because it brought fur and other goods down from Canada.
The town of Crow Wing was a busy city that had at most around 600 residents that called Crow Wing their home.

In 1847 Clement H. Beaulieu took over operations of the American Fur Company. He eventually built a mansion in the village, and it is the only structure that remains of the town. With the expanding town he joined John Fairbanks in having a large warehouse built and becoming a large outfitter in town for the Ojibwe trading posts. The Native Americans lived on the island of Crow Wing but did their business in town. The leader “Hole-in-the-day II” was the most influential negotiating trades with entrepreneurs around the world.

In 1852 organized religion came to Crow Wing when the Catholic mission was set up by Father Xavier Pierz. And then in 1856 Reverend Ottomar Cloetter established a Lutheran Church. The Episcopal church was led by Reverend E. Steele Peake. There are still many cemeteries on the site that remind people of the community that once was there.

During the 1860’s the town reached its peak population of about 600 people, but of those 600 people there were only seven families that were permanent residents. The town was mainly comprised of Native Americans, lumber-men and travelers that made it their home. But the town’s population soon declined rapidly, and there are a few factors on why that happened. One of the factors was the violence that happened between the Native American population and the trader’s. In 1868 the Ojibwe moved to the present day White Earth Reservation due to the violence. The other factor is that in 1871 the Northern Pacific Railroad decided to cross the Mississippi at what is now Brainerd, which is just 10 miles to the east. By 1880 most of the residents of Old Crow Wing had moved to Brainerd.

It was then in 1959 when the park was recognized as a site that was important to Minnesota’s history.

The Beaulieu house was removed from Old Crow Wing in 1880 when it was separated from the original house and the 1850 addition. The buildings where moved by the nephews of Beaulieu to farms in Morrison county. In 1923 the addition burned down but in 1988 the original home was donated to the park and moved to the original location at Old Crow Wing. The home was then restored to the 1849 exterior.
Currently in Brainerd the only museum is the Crow Wing County Museum, which focuses on the history of the Brainerd Lakes area and how it came about. This focuses on the logging community coming and creating the towns and then railroad coming through and having the town explode. There are also exhibits that tell the history mining and how that affected the area. This is an important exhibit for the area because it tells how the towns came about and grew, but is missing the history of how the people first came to the area.

The Crow Wing State Park is also the end for the current 123-mile paved Paul Bunyan bike path that starts at Lake Bemidji State Park. This offers bicyclist the opportunity to travel from town to town on their bicycles. The trail passes through 15 different towns before ending up at the Crow Wing State Park. What this does for the park is that it adds to the number of activities that are offered in the State Park, while connecting the park with the nearby towns.

The Crow Wing State Park already adds to the experiences of the Brainerd Lakes area, but it could add more to the community. Currently the park is a little disorganized and is a self-guided experience, there is not one good spot for the people to come and visit that allows them to come and learn about the area. People could come and experience the park, learning about the area and the history of the park. Although the park does a good job of allowing for adventures to explore the historical site. This would give a central place to come and visit that allows for historical learning.

As a society we are always looking for new ways in which to learn, ways that work more efficiently while improving our self-learning. This project will be important so that way visitors will be able to experience learning in a new way. It would provide hands on experiences that allows for all types of learners to come and visit and learn about the history of the Park. This would also help the department of natural resources because it would provide an example of a building that could be applied to other historical sites in Minnesota.
Cultural Context

The site is culturally diverse and offers a variety of cultures coming together in a single space.

The cultural context is important and quite diverse for the Crow Wing State park. It all dates to when the Native Americans were first recorded being at the park, the area is now known as the Brainerd/Baxter. The area lies in between the Dakota plains and the wooded forest of the North, so the Native Americans would go between them using the plains to hunt large animals like the buffalo and the wooded areas were used to gather timber for creating canoes to navigate the river. This is very important for the Native American culture because this is how they made a way of life. They used the elements that the earth provided them to eat, grow and survive as a culture. Another important part to the site would be the rivers that cross, the were used by the Native Americans to navigate up and down to expand the area to explore.

Being that the park lies on the edge of the plains and the woodlands when the major battle of 1768 occurred between the Ojibwe and the Dakota this forced the Dakota out of the area. They then resided in the Dakota plains while the Ojibwe continued to venture the area and expanding north. For some time before then the Dakota had control over the central region of Minnesota.

This changed though when Europeans started traveling the rivers and came across the villages that the Native Americans had created. The Europeans came to the area and found that the area where the two rivers joined would be a great place to establish a fur trading post. The post at the time was important to the Europeans because the two different rivers gave them a chance to travel in two different direction, expanding the area in which they could trap. The furs where then sent back down river to St. Paul to be made into clothing. Furs where important for making warm clothing but also was a way of stature and wealth.

The town then started to develop and soon many different people across America traveled through Crow Wing on the Ox cart trail. And with that the development of the Catholic and Lutheran Missionaries came about. At the time they served as places of worship for people to come and learn about what the religion was about. The missionary memorials still have an impact on people’s culture today, as the serve as a place of worship for some people. And for others it’s a place of remembrance as they come to visit the sites of their relatives.

As the number of people began to grow so did the violence of the town and many of the people moved to the nearby town of Brainerd. Initially there were no recorded disputes between the Europeans and the Native Americans but as the town begun to grow the Native Americans were forced out.

For this project it is important that this building incorporate all aspects of culture that the site offers. This is because the culture of the of this site it what helped to develop the area into what it is today. If the people did not discover the site and make the community that was once there the park would not exist.
**Site Analysis**

The Crow Wing State Park is located in central Minnesota near Baxter, MN.

The Crow Wing State Park includes 3,291 acres that stretches to both sides of the Mississippi River.

The park has many different paths and has two different entrances but the main entrance that is just off highway 371 is the main entrance that contains many of the sites, hiking trails, and roads.

Map Courtesy of the Minnesota Department of Natural Resources.
It is now my second time visiting the Crow Wing State Park and this time it truly blew me away. I was amazed by the variety of things to do and be apart of at the park. It has something there for everyone there no matter what sort of activities you are into. The park is both a nature lover’s dreams and an history lover’s paradise.

As you first enter the park you follow the long and curvy road that brings you past large fields and wooded forest. The road then opens as the bike path joins the road. As you make your way over the crest of a hill you are then greeted by a small visitor building that has information and vehicle passes for all visitors. Then building is very small and simple in form, that points out towards the road. I could see that the building wanted to reach across the whole road providing a gateway for the park. The building is so small that it only allows for a few people to be inside at a time. It is only open during that summer months when the park is full of campers and visitors. At the visitor building there is a bike repair station allowing the visitors that use the bike path a spot for needed repairs. There are information boards and maps that guide you to see the many sights that the park has to offer.

As you start to wonder around the park, you find an abundant amount of history across the whole park, but you are first history that you are exposed to is a plaque dedicating the park, and the events that make it significant. Just nearby there is a small that contains a simple canopy that highlights four boards and a map. The four boards have a lot of information about the park, it contains information about the landforms that are in the area, the history of the site and a list of activities that are done at the park during all times of the year. The Map lies at the center of the four boards and gives you directions to all the historic sites at the park. Some of the sites have buildings on them, while others contain a simple plaque dedicating the area. Laid into the concrete is the compass for the map. This feature is a very useful and successful for the map, because it gives all visitors reference as to the cardinal directions to the site they can look at the ground and figure out what way they are going instead of trying to read the map.

Moving past the visitor center you can go in four different directions, to the south you can go to the historic site of the battle of 1768. To the west the road brings you to the river and a picnic area, that has picnic benches, grills and even a covered area for when the weather gets tough. If you venture to the north, you are brought to one of the many historic sites or the large campground that is available in the summer for visitors.
SITE NARRATIVE

SITE VISIT – DECEMBER 10TH, 2017

I first traveled into the campground; the road going in is narrow curving back and forth leading you deeper to the forest. The road then opens up onto the campsites that are tucked away in the woods. The sites are empty at this time of the year but as I move around the circle of sites I can imagine that in the summer the campsites are full of families and adventures going between the sites, sharing stories and their experiences about the site. Some of the sites lie at the center of the circle but most of them are stretched out along the outer edge. Each of the sites provide their own paradise for the visitors to enjoy, and contain a grill, tent pad and picnic table. There is a public restroom that contains showers and toilets for the visitors to use during the times when the campground is open.

At the outer edges of the park lies many of the hiking trails that the park offers allowing hikers to take off right from their campsite and not having to drive to a different location to go hiking. As you make your way around the loop the sites on the outer edge have direct access to the Mississippi River. In my opinion these are the best sites to the whole campground, because the soft noise of the river flowing blocks out all the other noises of the park. You can get lost in the noise and have an experience that is very close to nature, it is an experience of serenity and one that it very peaceful. At the end of the campground lies the parks amphitheater that overlooks the river. The amphitheater is comprised of simple benches and a white screen, and is mainly used by the park staff to give presentations about the park. Overall the park was very peaceful but was also very community oriented, welcoming any people that come to visit it.

As you make your way back to the visitor center and down the historical path instantly you are exposed to both the Catholic Missionary and the Lutheran Missionary as the road goes in-between the two of them. To the west lies the Catholic Missionary site and memorial. Currently there is a Chapel on the site in which the previous Chapel had site because the previous Chapel was demolished in 1915. The new building was built in 1958 to honor Father Francis Xavier Pierz who first established the missionary in Crow Wing. The site also has many grave stones of inflectional who are or were bared in Crow Wing. To the east lies the Lutheran mission where a memorial rest. There is a simple path that leads up the memorial which is a stone with an inscription on it for the memorial of Ottomar Cloeter who brought the Lutheran Missionary to Crow Wing. The path goes all the way around the memorial and there is a simple bench in which people can sit at and reflect.
After you get past the two missionary there is a fork in the road that leads two ways. To the left you can go down to the river and use the boat landing for launching boats or you are able to go right and continue farther you come upon the area where Crow Wing use to sit. But in-between the fork in the road lies an important historical site and that is the area in which the school house sat for the town. The District One School was first put into place in about 1849. The first building was just a simple log building but then in 1888 an actual framed building was created. There are no parts left of the old school houses but rather just a simple plaque that remembers the site of the buildings.

At the historical town site there is a lot to see, but the first thing that you walk upon is the main OX cart path that was used in the early 1800’s as it is went up along the river to the ferry crossing. The path was once a dirt path that often–got muddy causing carts to get stuck, but today the path is a nice wide grassy path that allows for easy hiking. As I made my way up the path I stopped at the ferry crossing, and I couldn’t be more amazed. The river banks today are steep, and the water is deep, but you are still able to see the path on the other side of the river where the carts went up the hill. I decide to continue to wander up the path to see one of the parks most well know features.

As I come to the top of the hill I stop to take a breath and look at the map to find out how much farther that look out is, but when I look up I realize that I am already there. The Chippewa Lookout is one of the highest points in the park and is know for being the spot where the Ojibwe came to lookout on the river. This view blew me away because it lies on a straight portion of the river and you can look out on the river quite a ways north. I take a seat at the bench and stare off into the distance trying to take the sights in. I can hear the water flowing down river and under the ice that has built up in one of the turns in the river. The flow of the water is pushing and breaking pieces of ice off, it is very loud as the ice pops and crashes. But that is not all that I hear, the longer I sit there the more I hear and the more animals I hear. Birds begin to be curious and come closer and closer to me, an eagle flies over the river searching for food. And then there is honking of a group of trumpeter swans on the open portion of the river. There are loud as they all start honking at the same time, talking to each other. I decide to move closer for a better view of them since they were close to the landing. As I rush down the steps they all get up at the same time sounding like plane going off as all their wings are hitting the water. That was not the last I heard of them that day, they seemed to fly around the park the whole time I was there.
Site Analysis

Site Narrative
Site Visit – December 10th, 2017

I then make my way back south on the OX Cart path making my way back towards the historic town site. Along the river there is a small picnic area that allows for visitors to spend time along the river side while looking over the town, just as people did in the past when the town was there. As you get closer to the town the OX cart path turns into the boardwalk that was the main street of Crow Wing. The boardwalk lies at the river’s edge and is replicated with wooden planks. Along the boardwalk lies many different plaques that explain the history of the town, and visitors are encouraged to imagine as if they were walking along the historic town.

In the field and along the rivers there are many markers that define where buildings and items were in the town. The markers point out the old town that was along the rivers edge, the old warehouse location that was used to store items for sale in the trading post. On the other side of the boardwalks the Browns hotel that was located in the valley. The only standing structure on the site is the Beaulieu home that was restored to the original condition. You can walk all around the building and peer inside, but you are unable to go inside. The house lies at the high part of the valley and is a representation of how high and powerful Mr. Clement Beaulieu was in the community.

Just tucked in the edge of the woods lies a simple platform that has history of the Clement Beaulieu mansion and how the home made its way back to the state park after it was moved after the town disappeared. Beyond the woods lies an open field that currently holds a parking lot for the visitors. This spot would be the ideal location for my building because it does not impact the historical sites. It also lies at the center of all the historical sites besides the area where the battle of 1768 occurred. There is already a road that goes into the parking lot and makes a big loop, at the center of this loop a building would be appropriate. You would be able to come up the road to building and as you came up the hill the building would appear to come out of the earth. Being that this site lies at the center of the current historic sites it would be a great starting point for the visitors. They would then be able to start at the building, learn about the history and then go from there exploring the sites that best interest them. There are many trails that also interest this area and it could be a point for hikers to start their journey.
Site Analysis

Site Narrative

Site Visit – December 10th, 2017

The Crow Wing State park is a diverse park that allows for many different activities to happen in the park. The park offers some of the most beautiful nature that the area has to offer allowing visitors to see an abundant of wildlife depending on the season. If you enjoy the history more than wildlife there is plenty of that, and the addition of this building will allow for all types of people to come to the site and learn more about the building. It also centralizes the information while also giving an active learning environment that allows for children of all ages to learn hands on with the artifacts. This project would not be able to be done if it wasn’t for the history of the site, the added bonus to this site is that it takes advantage of all the natural beauties that Minnesota state parks have to offer.

Figure 40 – Looking South at the site

Figure 4 – Existing parking area

Photo Grid Showing the Proposed Location of the New Building.
### Site Analysis

#### Climate Data

- **Figure 43** - Annual High and Low Temps

- **Figure 44** - Monthly Precipitation

- **Figure 45** - Yearly Wind Rose

#### Soil Data

- **Figure 46** - Soil Map Showing Slope and Soil Types

- **Legend**:
  - MA - Ponded Soil
  - W - Water
  - D67A - Loamy Sand 0 to 2 percent Slopes
  - D67B - Loamy Sand 2 to 6 percent Slopes
  - D67C - Loamy Sand 6 to 12 percent Slopes
  - D96B - Pitted 1 to 8 percent Slopes
  - D96C - Pitted 8 to 15 percent Slopes
  - D96D - Pitted 15 to 60 percent Slopes
  - D99A - Sandy Loam 0 to 2 Percent Slopes
  - D99G - Corliss Complex 15 to 60 Percent Slopes
Site Analysis

Vehicle and Pedestrian Traffic

Figure 47 - Vehicle Traffic Map

Figure 48 - Pedestrian Map

Building Locations

There are very few buildings on the site, the few buildings that are on the site are storm shelter locations, existing historic buildings and buildings that are for the staff working the park. Besides the entry buildings located at the entrance to the park there is also a service building that stores equipment for maintaining the park and a residence home that is made for the park supervisor who stays at the park year round.

Figure 49 - Existing Building Map
**Watershed**

Figure 50 – Watershed Map

**Topography**

Figure 51 – USGS Topography Map – Courtesy of the Minnesota Department of Natural Resources.
**Performance Criteria**

**Environmental Performance:**
The environmental performance can be measured by making the building qualified for LEED or green certification. This is a good measurement because it will make sure that the building is self-dependent and rather impacting the environment giving back to it. Also the buildings environmental performance can be measured by making sure that it has a long life cycle in order to make sure that the building does not break down and hurt the environment instead of helping it out. This information can be measured by meeting or exceeding the standards that are set be LEED and Green Design. The analysis for this category will need to be measured over many different years observing how the building and the materials that are used hold up over time. Does the building need lots of repairs, does the materials break down over time? The building is going to want to stand up over time and require little maintenance so that way the owners can focus on entertaining the people that come to visit it. If the building is able to sustain a span of 50 years without major renovation that would be a successful building. Because what that means is that the materials that were selected preformed in a way that was successful. In turn what that means is that costs going to the building are very minimal.

**Behavioral Performance:**
The building will be open to the public during the times in which the park is open. As people enter the park it would be beneficial to start at the building to find out more about the park. The hope of this project would be that people come into the building and find out about the park. They then venture out and find the historic sites that the building highlights. And then the people would make their way back into the building after they explored the park in order to find out more about the building. The way to measure this would be to ask people how they used the building and the order in which they visited the site.

**Psychological and environmental Impact:**
We want this building to have a positive impact on both the people that come and visit it as well as the environment that it sits in. What that means is that the building needs to provide a experience that is beneficial for all people and the environment that it is in.

**Space Allocation:**
In order to achieve efficient space allocation the building the spaces need to be efficiently used in a way that allows for no wasted space in the building. What that means is that all the spaces in the building are used appropriately, for their intended use. In the end the final building will be laid out and all the exhibits will have their own space in the building. But the building can also be flexible so that way temporary exhibits are able to come in and preform efficiently. To make sure that the building is being used effectively a study should be done observing the people that walk through the building and seeing how they use the different spaces, are they walking in a path that the design laid out, or are people walking into places that they shouldn’t.

**Energy Consumption:**
For the energy consumption of the building hope to measure how the building is doing by recording and displaying the data of energy consumption. The building will also be self-reliant meaning that the building does need to be supported by an external power source but rather a natural source of energy (wind, water, solar). The Energy consumption will be monitored by a computer system that measures the energy that is being produced by the natural sources. This will then be apart of a display in the interactive center where people can see how well the building is doing. The data that is measured will be stored to compared how well the building is being used. That data then can be compared to the weather conditions at different times of the year. This data could be useful for the Department of Natural Resources because the data from this building could be used to advocate for similar buildings in the future. The energy consumption would be judged off by how much energy the building is producing, and then being related to how much energy the building uses. If the use is less than the produced energy than the building is successful. The extra energy can then be used in other places in the park to hopefully create an efficient and self-sustaining park.
**Performance Criteria**

**Room Spaces and Sizes**

<table>
<thead>
<tr>
<th>Room</th>
<th>Small (S.F.)</th>
<th>Average (S.F.)</th>
<th>Large (S.F.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lobby</td>
<td>1,500</td>
<td>1,750</td>
<td>2,000</td>
</tr>
<tr>
<td>Visitor Information</td>
<td>500</td>
<td>750</td>
<td>1,000</td>
</tr>
<tr>
<td>Ojibwe Exhibit</td>
<td>1,500</td>
<td>2,000</td>
<td>2,500</td>
</tr>
<tr>
<td>Red River Trail Exhibit</td>
<td>1,500</td>
<td>2,000</td>
<td>2,500</td>
</tr>
<tr>
<td>Old Crow Wing Exhibit</td>
<td>1,500</td>
<td>2,000</td>
<td>2,500</td>
</tr>
<tr>
<td>Interpretive Center</td>
<td>2,500</td>
<td>3,750</td>
<td>5,000</td>
</tr>
<tr>
<td>Presentation Room</td>
<td>750</td>
<td>1,000</td>
<td>1,250</td>
</tr>
<tr>
<td>Circulation</td>
<td>2,000</td>
<td>3,000</td>
<td>4,000</td>
</tr>
<tr>
<td>Restrooms</td>
<td>1,000</td>
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</tr>
<tr>
<td>Mechanical</td>
<td>1,000</td>
<td>1,500</td>
<td>2,000</td>
</tr>
<tr>
<td>Total</td>
<td>14,750 SF</td>
<td>20,500 SF</td>
<td>26,250 SF</td>
</tr>
</tbody>
</table>

Figure 52 – Spaces and Sizes

**Lobby:**
Enterance to the building that allows for visitors to come and enjoy the space.

**Visitor Information:**
Gives a spots for the guests to gather information on the area and park.

**Presentation Room:**
Area with screen that allows for presentations for 50 people.

**Exhibits:**
Three exhibit spaces that allow for the education of the topic.

**Interpretive Center:**
A center that allows for educational learning about the state park as well as the building.

Figure 53 – Space Matrix

**Performance Criteria**

**Space Matrix outlining spacial diagramming.**
All these areas are important to the building and the park because they are the areas that make the building and park a success park. I want to make sure that the building performance at a high level and what this will do for the DNR is provide a building that can be an example of high performance building that can be utilized for many years to come. What it can also do for the DNR is to provide a standard as to what new buildings should be up to when they are created. If this is a successful building people will want to come and visit it from all over the state. People will then come and visit the area surrounding the area increasing the business in the area.

Inside the building it will provide a positive learning experience that allows for visitors to explore the building by themselves or for a people to come and guide them on a tour. Visitors will leave the building and the site knowing more about the area and why it came about. The building will promote learning in a way that is successful for many people different types of personal. Visitors will want to come back the building and try and learn more about the park and the history.

In the end the building will give back to the environment rather than taking from it, producing natural energy for the park. The hope with this is to promote the use of the natural resources in order to create efficient and sustainable buildings for the state of Minnesota.

**Figure 54 – Spatial Diagram**

The spaces are laid out in a way that allows people to move back and forth from space to space very easily. The exhibits are all connect and move in a direction that is similar to a time line. This is because the different exhibits are based off the time line of the town. If one of the events did not occur then it would be likely that the town would not exist. The one thing that connects them all together is the circulation in the building. There are many different spaces to this building but they will all connect together in order to form one unique space.
Photos from the National Register of Historic Places.

Figure 55 - Historic town of Old Crow Wing

Figure 56 - Historic OX Cart Path

Figure 57 - Historic OX Cart Path

Figure 58 - Historic OX Cart Path
Design Solution

a process of creating a design solution that works with the program while reflecting the site on which it sits.
**FORM INVESTIGATION**

**THE PROCESS OF FINDING THE RIGHT FORM FOR THAT INCORPORATES THE PROGRAM AND SITE.**

After working through the program, I began to work on laying out the spaces in the building. First separating the galleries from the interpretive center, and then put the public services at the center of the building. The red line represents the path that the visitors would take, the journey that they would take through time. The problem with this design is that it did not give any attention to the river or the old townsitewhich are major parts of the park.

After working through the program, I began to work on laying out the spaces in the building. First separating the galleries from the interpretive center, and then put the public services at the center of the building. The red line represents the path that the visitors would take, the journey that they would take through time. The problem with this design is that it did not give any attention to the river or the old townsite which are major parts of the park.

And so from there I was able to turn the building form and allow it to open up towards the river and provide a direct connection to the townsit. Visitors would be able to walk into the building and be directly greeted by the visitor desk. They would then be able to move left or right to either the different galleries or towards the interpretive center. This became a problem in the design because I wanted people to be able to flow through the building very fluidly. This plan forced people back and forth creating confusion.

With the development of the floor plans a building form began to emerge, reflecting trees poking above the skyline. But the problem with this form is that it was too symmetrical and one that does not look natural.
And so I decided to create a building that would allow the user to walk through it along path just as the main street is along the river. This plan allows the users to walk along a single path creating a single journey for the users. That path is random just as the trees are as they grew back on the site after the town was abandoned. The visitors have to weave back and forth in order to maneuver around the walls. This form helps to create a building plan that reflects the timeline of the site.

Even though the path seemed random it did not reflect the pattern of the trees on the site. And the gallery walls began to move, pushing and pulling to provide a random path that you must move back in for in. Also, the visitor center and gift shop moved in order to help the flow of people that would be entering the building. They can either go to the north to use the restrooms or they can go south exploring the journey that the building has to offer.

The roof line of the building changed drastically pushing and pulling to represent the tree line illustrated in red. This created different heights in the galleries spaces while still making the entry of the building feel grand.
**FORM INVESTIGATION**

The process of finding the right form for that incorporates the program and site.

And so the final form comes out. It creates a random path that allows the user to take their own journey below the canopy of the trees. It creates a connection to the river opening itself up to it. The final layout of the building conforms to the natural landscape and directs the visitors in the direction of the old townsite. All the spaces are laid out in chronological order so that way the visitors can go through the spaces as they were in time. This form allows for the users to have their own journey as they make their way through the building.

The roof line did not change much at this time besides the addition of skylights over the trail in the building create openings in the tree canopy, adding to the form. So now that the building has depth.
After all the form investigation and arranging of the different spaces, I was able to come up with a form that reflects the natural landscape of the site. The roof line act as the tree tops, pointing in many different directions and varying in heights. The skylights that are above the main corridor act as openings in the trees, and the structure that is still there is the branches that poke through the opening. The arrangement of the walls act as the tree trunks just as they grew back after the town was abandoned. The pattern is random, and you need to move back and forth in order to miss the walls (or tree trunks).

Rendering showing the view from the South West corner of the building
The new building will tie into the existing historic site providing a stronger connection.

When you drive into the state park you are taken down a path that come to a stop, and from there you take a right onto the existing road. It brings you past many of the marked historical sites like the old churches and the site in which the school house use to be. There is parking that allows for people to stop and get out an look at them, but the main road continues onto the new building. Currently the site just serves as a parking lot for the old townsite.

As you drive up a little hill you are able to see the roof line as it pokes from the tree line. And then you get on top of the hill and you can see the whole building. The path brings you around to the east side where you and blocks your view to the river providing a sense of mystery and adventure. You can park along the north side of the building, before entering on the west side. This is the first time that visitors get a view of the river and the path that leads them on the journey that the building provides.
This is the view that visitors will first see as they enter the building. You can see along the whole side of the building down to the trail that the building leads to you to. And if you look close enough you can see the gap in the trees in which the old main street ran through the center of Old Crow Wing. Off to the east farther is a larger opening in the trees that allows visitors to look out onto the island that was habited by the Ojibwe tribes.

From this view you are also able to see the how the roof line of the building conforms to the tree line.

Rendering showing the view from the North West corner of the building
These elevations help to illustrate how the roof line of the building reflects the tree line beyond.
The final floor plan is one that represents walking through the forest, below the trees. You must move back and forth to get around some of the trees. But there is a faint path that leads you out towards the main townsite. The plan allows for three galleries, an interpretative center and visitor information. These different areas are organized in chronological order to bring you through time.
These drawings show how the different roof heights work in the galleries as well as showing the footing and column pad locations.

The following is a wall detail that illustrates how the curtain wall connects back to roof and base wall, as well as showing the structure holding up the roof and skylights.
Final Solution

Wall Detail @ Joining Roofs

The following is a wall detail that illustrates how the curtain wall connects back to roof and base wall. It also shows how when two roofs meet and share a column and beam structure.

Performance Analysis

Response to the Site.

The site was hard to work with at first but after multiple trips to the site I got a better understanding of how to place a building amongst the historical site. I wanted to make sure that I didn’t disturb any of the historical elements that were on the site, so when I found the parking lot on top of the hill I knew it was perfect. It had a connection to the river and the main street that runs along the river, and that is where the design of the building started. I never lost that connection though out the project rather it grew stronger as the project moved forward.

After providing the connection of the river and the trail I looked to the surrounding nature for influence on the building form finding the trees. I think my building form is strong in this area, the fact that you are able to take the tree line and put it over my roof line showing how similar they are being really strong. That is something that came out in the review as well that the critic enjoyed going on about how much they enjoyed the shape of the roof line. I think that this building really pushed the connection to the site, taking many elements of the site and directly applying them to the building so that way everyone is able to see them.
When I first started this project, I knew the ways that I best learned in historical environments and what I enjoyed seeing when I visited a state park. And I wanted to take those ideas and the ideas that I had found in my research and apply them to this project. After looking at all the research and finding out how people learned best in historical environments I decided to focus on some key points.

1. Creating a personal journey for the user
2. Creating an environment in which people could handle artifacts
3. Producing an environment in which children could be engaged with history
4. Providing a space that can tell the forgotten stories

And so, I started focusing on these points in my design. Through the creation of the path in the building as well as the openness of the galleries, users can move freely through the building. I am not trying to force a feeling on the user rather have the user come to conclusion on their own. That way everyone who walks through the space gets something different out of it in the end. This can also be applied to people revisiting the building because they may not get something different out of it when they walk through the building a different way.

When I visit a museum, I find it unfortunate that visitors cannot handle artifacts. Because when I am able to handle an object I feel that I get a better understanding of how it works. I know that we can’t do that with artifacts but with the help of recreation some artifacts could be available for the public to handle.

Children are always wanting to learn, and I feel that it is important that children learn about the history and culture of where they are. After reading many article and visiting a view museum it was clear that children best learn by picking up objects and reading playing with them. And so, the idea of the interpretive center came about that provided a space for children to learn and play. They would be able to play in the three different time periods learning something new about each one.

If we do not have a place in which stories are written down or told they cannot be carried on in history. And that is the purpose of this building because some of those stories are starting to fade at the current state park. This building would allow for people to come and learn about those stories and pass them on.

The main emphasis of this project was to create a building that would house all the history that the site has to offer. And I did just that by creating three different gallery spaces that highlight the three major events that happened at the site. The space would be big enough to allow for all the artifacts to be presented as well as having excess room to allow for the galleries to grow over time.

Another major emphasis was creating a building that allow the public access to all the history. The building would be public and allow for people to use it during times when the park is open. There would be personal there in order to help out any visitors that may have question. Visitors would be able to venture through out most of the building as there are little private space.

One of the goals of the project was to learn how people learn in historical environments how I can best improve their learning, and through my research I found that people learn best when they are able to handle and touch objects as well as creating a journey. This building does that by creating paths in which they user can explore, getting something out of the journey each time.

I feel that I meet the goals that I set for myself in this project while at the same time creating a building that has a strong connection to its surrounding environment.
DIGITAL PRESENTATION
PHOTOS OF THE DIGITAL SLIDES THAT WERE PRESENTED AND CRITIQUED
PHYSICAL DISPLAY

PHOTOS OF THE PHYSICAL DISPLAY FOR THE PUBLIC TO SEE.

Physical display includes two historic books, a black and white photo, my first semester book and progression models.

Progression models, floor plan 1 – 3.

Progression models, floors 4 and 5; the two historic books.
APPENDIX

PREVIOUS STUDIO EXPERIENCE

SECOND YEAR
Fall 2014: Darryl Booker
Teahouse Project
   Moorhead Teahouse
Boathouse Project
   Minneapolis Rowing Club

Spring 2015: Joan Vorderbruggen
Teahouse Project
   Montessori School
   Building Block Project
Boathouse Project
   Pricktzer Prize Project
   The Barrel Owl House
Dwelling Project
   Barney Wendal Dwelling

THIRD YEAR
Fall 2015: Ronald Ramsey
Cat Mausoleum
   Par Los Gatos
Wood Structure
   Assemblage of Parts
Masonry Structure
   Fargo Islamic Mosque

Spring 2016: Bakr Aly Ahmed
Concrete Structure
   NDSU Culinary College
Steel Structure
   Fargo Sports Complex

APPENDIX

PREVIOUS STUDIO EXPERIENCE

FORTH YEAR
Fall 2016: David Crutchfeild
Capstone Design Project
   (High-rise)
   160 Folsom

Spring 2017: Don Faulkner
Urban Deign Studio
   Various Projects

FIFTH YEAR
Fall 2017: Mark Barnhouse
Advanced Architectural Design
   NDSU Wetlands Research Facility

Spring 2018: Ganapathy Mahalingam
Design Thesis
   Crow Wing Visitor and Discovery Center
APPENDIX

PERSONAL IDENTIFICATION

BENJAMIN D. JOHNSON

Hometown: Duluth, MN
Address: 5429 N. Tischer Rd. Duluth, MN 55804
Phone: (218) 590 – 5081
Quote: “NDSU has taught me how to develop a building from the start of a program to the details of the walls.”